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COLLEGE ORGANIZATION AND
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COLLEGE ORGANIZATION AND ADMINISTRATION

*A Report
Based Upon a
Series of Surveys of Church Colleges*

By
FLOYD W. REEVES
and
JOHN DALE RUSSELL

1929
BOARD OF EDUCATION
DISCIPLES OF CHRIST
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PREFACE

The present widespread interest in the problems of higher education has prompted the writers to offer a volume devoted to the principles of college organization and administration. The effect of the spirit of scientific investigation, resulting in the derivation and application of new techniques, has been much later in reaching the field of higher education than was the case of the general field of public education in its elementary and secondary levels. Indeed, it may be said that only within the past decade has the movement for the scientific investigation of educational problems been felt to any extent in the realm of college education. There seems little doubt, however, that, although late in arriving, the movement will have just as marked an effect on higher education as it has produced and now is in the process of producing in elementary and secondary education.

The techniques of educational administration, particularly as applicable to the public schools, have for a quarter of a century been a subject of study. As a result there exists today a body of principles of public school administration which have behind them the consensus of opinion of most good authorities. In the field of higher education there exists as yet no such formulation of principles of administration. There is considerable evidence that the general principles of public school administration are not entirely applicable to institutional administration, particularly in the field of higher education, just as many of the principles of educational method which have been found satisfactory in lower levels of education do not seem to apply with equal validity to education of college level.

The formulation of the principles of organization and administration of higher education seems a natural outgrowth of the making of college surveys. Principles of administration, at first derived empirically, can through the medium of a considerable number of surveys be tested out in actual conditions,

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results can be compared and contrasted, and a sort of experimental proof obtained through the observation of the operation of the suggested modifications which are made in the light of the tentatively derived principles of organization and administration.

It has been the good fortune of the writers to have engaged in a considerable number of college surveys, some 60 different institutions having come under their observation through the medium of a complete and thorough-going survey. The present volume represents the codification of those principles of organization and administration of higher educational institutions that have been tried and tested by the writers in these various college surveys, and that have survived the experimental test of observation in actual operation.

Throughout the work there has been a constant effort to make the text practical, rather than theoretical. A large amount of descriptive material, taken from the texts of actual survey reports by the writers, has been introduced, not only for the purpose of illustrating the principles being discussed, but also for the purpose of leaving no doubt in the mind of the reader as to the practicability of the principles presented. The college administrator will find many tables which will be of value as standards for checking his own institution.

The volume has been prepared with the thought that it will be of interest not only to college presidents but also to the administrative staffs of colleges, particularly to deans, registrars, and business officers, and in general to students of the problems of administration of higher educational institutions. The writers also cherish the modest hope that the volume will prove of interest and worth to all those who are engaged in the service of higher education, as members of faculties of instruction, as members of boards of trustees, and as members of church boards having some control over the financial resources of denominational colleges.

The data used in this volume are drawn chiefly from surveys made of sixteen colleges and universities affiliated with the Board of Education of Disciples of Christ. Five additional

sources are used to some degree: (1) the survey of the state-supported institutions of higher learning in Indiana; (2) the West Virginia survey of higher education; (3) surveys made of several other institutions of higher education, such as Mercer University, Centre College, Northland College, etc.; (4) educational counselling work carried on in some six or seven colleges; (5) cost studies made for the North Central Association of Colleges and Secondary Schools.

A brief statement of the origin of this comprehensive program of surveys carried on for the Board of Education may be of interest to the reader. The International Convention of Disciples of Christ at the annual meeting in 1922 instructed all the organizations reporting to it to make a survey of all the work being done by and under the auspices of the respective boards, the Board of Education being one of these organizations. In compliance, the Board of Education instructed its General Secretary, H. O. Pritchard, to make a survey of the educational institutions affiliated with it. However, the following year the Board of Education set up a new department, denominated the Department of Endowments, and called H. H. Harmon to become the departmental Secretary. A number of colleges were demanding financial campaigns immediately. Mr. Harmon decided not to launch any campaign until a complete and searching survey of the institution had been made and accurate information obtained in a scientific manner regarding its work and needs. An arrangement was made with one of the writers (F. W. Reeves) to direct such a survey at two of these institutions. Subsequently, under the leadership of Secretary Harmon similar surveys were made of each of the affiliated institutions, and this survey program became the fulfillment of the request of the International Convention. This plan was carried through over a period of four years, and a general report of the surveys was made by the writers to the Board of Education early in 1928. In addition, individual survey reports were made to each of the colleges surveyed immediately upon their completion. The complete report, of

which this volume is a unit, will be made to the next International Convention, which meets in Seattle, Washington, August 7-14, 1929.

A considerable part of the materials of a general nature included in this volume were compiled by the Board of Education of Disciples of Christ under the direction of its Secretary, H. O. Pritchard. The writers are also indebted to Mr. Pritchard for reading the manuscript and making valuable suggestions.

Acknowledgments are also due the following individuals who rendered valuable technical assistance in the making of some of the surveys upon which this volume is based: Genevieve Brown, Director of Publicity and Personnel, Board of Education of Disciples of Christ; Henry Harmon, Professor of Education, Culver-Stockton College; Glen Martin, Professor of Mathematics, Western Kentucky State Teachers College; Andrew Owen, Superintendent of City Schools, Newport, Kentucky; Virgil Payne, Professor of Chemistry, Transylvania College; Maurice Seay, Principal of High School, Danville, Kentucky; Harley Smith, Professor of Economics, Transylvania College; J. B. Weldon, President of Cotner College.

The writers have no apologies to offer for any shortcomings that may exist in their treatment of the subject of college organization and administration. There is probably a lack of completeness, but this is characteristic of most pioneer enterprises.

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CHAPTER I

INTRODUCTION

Before undertaking the presentation of the principles of college organization and administration, to which this volume is devoted, there is need of a general background. In the study of the organization of any college or university, due care must be taken to construct a rather complete picture of its setting, in order that principles and procedures of a general nature may be applied both accurately and sympathetically.

Several items may be enumerated from the many which constitute essential details in this background picture of the institution of higher learning. (1) The present supporting constituency needs to be kept clearly in mind. If a religious group, the aim, concepts, type of church government, number of communicants and their geographical distribution, all become of importance. If the institution be publicly supported, the social composition of the population, types of industry followed, geographical diversification of the territory, and prevalent political opinions and ideals are examples of the details which must be studied. (2) The purpose for which the institution was founded, the time of founding, and the group of individuals sponsoring the young institution, should form a part of the picture. (3) Consideration must be given to the relationship which the institution bears to other educational institutions, particularly those supported by the same religious constituency or taxing group. Included in this item is the matter of the relationship to official or semi-official boards having oversight of groups of institutions. (4) The character of the work attempted is a most important item of general information. This includes not only such matters as types of curricula offered and the number of years of work provided, but also the level of excellence aspired to, as reflected in the type of accreditation held from regional associations or state departments of education. (5) A study of the environment in which the institution is situated is important. This should include an analysis

of the extent to which the program of the institution is being modified to meet changing environmental conditions. (6) The field offered for higher education of the type which the institution contemplates needs to be considered carefully, and a clear understanding gained of the niche which the institution hopes to fill. (7) Finally there is necessary some rough evaluation of the contribution which the institution has rendered in the past, both to higher education in general and also to the program of the constituency which it serves.

In the opinion of the writers, the most satisfactory basis for the development of principles of organization and administration is through first-hand contacts with a considerable number of institutions, contacts which are probably best obtained through the medium of the survey. It is the purpose of the remainder of this chapter to illustrate the background details pertinent to the study of an institution or group of institutions by facts gathered in connection with college surveys. Large reference will be made to facts obtained in the comprehensive program of surveys undertaken for the Board of Education of Disciples of Christ. In most of the essential elements, the background of the institutions sponsored by Disciples of Christ is typical of that of American colleges generally. The presentation of this material will serve the purpose not only of making clearer the data and conclusions given in later sections of the report, but also of illustrating how such background information may be gathered for other colleges as well.

Supporting Constituency

Disciples of Christ, as an independent communion, is slightly more than one hundred years old. It was the last in development of the numerically great American religious bodies. In 1927 it stood fifth in the point of membership among the great religious groups of America, having 1,487,376 members in the United States.

The communion traces its origin to what is known as the Current Reformation, or Reformation Movement. Historically, this was a time of great intellectual activity and inquiry, and

the progenitors of the Reformation Movement, sharing the spirit of their age, were men of high intellectual capacity. They likewise had a passion for education and placed a high estimate on the value of colleges.

Founding and Early History

Very soon after the Current Reformation began to shape itself into an organized religious group, colleges were established. Bacon College, founded at Georgetown, Kentucky, in 1836, enjoys the honor of being the first one founded. The institution closed its doors after a few years, but Transylvania College at Lexington, Kentucky, whose charter dated from 1798, came under the control and auspices of Disciples of Christ in 1865, and is generally regarded as the successor of Bacon College.

Alexander Campbell, one of the leaders of the Reformation Movement, himself founded Bethany College. In order to be historically accurate one should say that Buffalo Seminary was the forerunner of Bethany College. This Seminary was inaugurated at Bethany, West Virginia, in the year 1818, in the home of Alexander Campbell. Here for a number of years Mr. Campbell offered educational advantages for the youths of the community, as well as training for young men for the work of the Christian ministry. This beginning, in the home of a minister, is typical of the early history of many American colleges and universities.

Bethany College, as such, was not founded until 1840. After this institution was well under way, a number of others were founded in other states. Butler University, Indianapolis, Indiana, was chartered in 1850. Hiram College, Hiram, Ohio, was chartered in 1850 also. Christian University, now Culver-Stockton College at Canton, Missouri, was chartered in 1853. Eureka College, Eureka, Illinois, began as a girls' seminary in 1848 and was chartered as a college in 1855. There were other colleges founded during this same period that have long ago either ceased to exist or been merged with other institutions.

After the Civil War other colleges were founded, many of

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PROPERTY
OKLA. HISTORICAL SOCIETY
LIBRARY

which have likewise passed out of existence. Texas Christian University, located at Fort Worth, was founded in 1873 and is the oldest existing institution founded since the Civil War. Other institutions were founded in the eighties, the nineties, and since nineteen hundred.

The major portion of the work of Disciples of Christ in higher education was begun at a period later than that of other religious communions. However, many of the Disciples institutions are contemporaneous with the establishment of state universities. Recognizing the opportunities in connection with tax-supported institutions of learning, Disciples began as early as 1890 to establish Bible chairs and schools of religion in proximity to and in cooperation with these great centers of learning. There are now being conducted educational projects of this type at 16 state universities.

There seems to have been one single, controlling purpose in the minds of those who were responsible for the founding of Disciples colleges. That purpose was the provision of opportunities for training the leadership for the communion, and through this leadership, to provide for the continuation and extension of the principles upon which the communion is founded. To a large extent, the religious motive has continued to dominate these institutions.

Relationship to Other Educational Institutions

Almost all of the colleges of this communion were brought into existence by the efforts of some individual or individuals. Seldom did their founders appeal to state or regional conventions for sanction and recognition until after the institutions had actually been launched. The same supreme independency which characterized the establishing of local congregations controlled also in the founding of colleges. Because of this manner of founding colleges, many of them were badly located, perhaps some of them were ill-advised, and many of them were unable to survive.

Until the close of the nineteenth century, Disciples colleges operated independently of each other and in many instances

became highly competitive in both their methods and their spirit. The first attempt to bring about cooperation in the promotion of the educational program of the communion occurred in 1894, with the organization of the Board of Education of the American Missionary Society. Various modifications were made in the organization of this central agency throughout the years, resulting, in 1914, in the formation of the Board of Education of Disciples of Christ. With a slight modification in organization, made in 1922, the Board has continued its operations to this date.

The Board is controlled by sixty directors, about half of whom are representative of the church at large, and the other half representative of the affiliated institutions. Affiliation with the Board is voluntary on the part of the institutions. The function of the Board is to promote cooperation and coordination of the educational program of the communion.

Character of Work Attempted

There are now thirty educational institutions of one kind or another cooperating with and through the Board of Education of Disciples of Christ. There are a few Disciples institutions which do not cooperate with the Board. A list of the institutions which cooperate with the Board is given below in classified order.

Group I.—Standard Four-Year Colleges and Universities:

Bethany College, Bethany, W. Virginia.
Butler University, Indianapolis, Indiana.
Culver-Stockton College, Canton, Missouri.
Drake University, Des Moines, Iowa.
Eureka College, Eureka, Illinois.
Hiram College, Hiram, Ohio.
Lynchburg College, Lynchburg, Virginia.
Phillips University, Enid, Oklahoma.
Texas Christian University, Fort Worth, Texas.
Transylvania College, Lexington, Kentucky.

Group II.—Four-Year Colleges Accredited by State Departments of Education or State Universities:

Atlantic Christian College, Wilson, North Carolina.
California Christian College, Los Angeles, California.
Cotner College, Lincoln, Nebraska.
Spokane University, Spokane, Washington.

Group III.—Standard Junior Colleges:

Christian College, Columbia, Missouri.
William Woods College, Fulton, Missouri.

Group IV.—Junior Colleges Accredited by State Departments of Education or State Universities:

Carr-Burdette College, Sherman, Texas.
Missouri Christian College, Camden Point, Missouri.
Randolph College, Cisco, Texas.
Hamilton College, Lexington, Kentucky.

Group V.—Institutions Affiliated with Universities or Colleges for the Purpose of Rendering Special Types of Service:

Bible College of Missouri, Columbia, Missouri.
Disciples Divinity House, Chicago, Illinois.
Drury School of the Bible, Springfield, Missouri.
Illinois Disciples Foundation, Champaign, Illinois.
Indiana School of Religion, Bloomington, Indiana.
Kansas Christian Foundation, Topeka, Kansas.
Nebraska Disciples Foundation, Lincoln, Nebraska.
Oklahoma Christian Foundation, Oklahoma City, Oklahoma.
The College of the Bible, Lexington, Kentucky.
University School of Religion, Tuscaloosa, Ala.

From the point of view of financial resources and number of students enrolled, the ten institutions of Group I constitute the most important group. Of the thirty institutions listed in the five groups, the ten institutions of Group I have more than 70 per cent of the permanent assets, more than 70 per cent of the income, and more than 70 per cent of the students enrolled. The colleges of Group II are similar to those of Group I in their general aim and organization, but are not meeting the requirements of the regional standardizing associations. The aim of all of these institutions is to meet these requirements and thus become standard institutions. Group IV bears a relationship to Group III similar to that which Group II bears to Group I.

The future of some of the institutions appears very doubtful. Unless the non-standard four-year colleges are able to obtain additional funds in the near future, it appears probable that they must elect either to become junior colleges, affiliate with some other institutions in a manner similar to that of the institutions of Group V, or close their doors.

Some of the standard institutions of Group I may face a like situation. Two or three of them, in particular, are in a critical situation and may not be able to survive. The principal

cause of their embarrassment is lack of adequate funds with which to provide a program of offerings that can compete with state institutions in attracting students. Lack of funds also results at these institutions in lower faculty salaries than are paid for men of equal professional rank at other colleges. In consequence, the inadequately supported college is being constantly drained of its strongest faculty members.

The future of the non-public junior colleges is difficult to predict. This matter is bound up so intimately with the whole future of the junior college movement that prophecies seem somewhat hazardous. If the publicly supported junior college is ultimately accepted as a part of the program of public education, as many authorities think it will be, there will probably be no place for the unaccredited junior college supported by a religious group. At least the history of the growth of public secondary education would support such a conclusion. Granted, however, that the adoption of the junior college as a part of public education is a somewhat remote prospect in many states, the fact still remains that non-public junior colleges attempting to meet the needs of communities for this type of education must be of high grade with ample funds to support the program offered. Most of the junior colleges of Disciples of Christ face the immediate problem of substantial increases in their endowment funds if the institutions are to continue to operate.

During recent years the enrolments of state-supported institutions have been increasing much more rapidly than the enrolments of institutions supported by religious bodies.¹ The institutions of Group V represent an attempt of a religious communion to fit its educational program into the altered educational situation, and to bring the influence of religion to institutions already established on a sound financial basis, either as state-supported institutions or as privately endowed colleges or universities. Although this type of work constitutes a very interesting experiment in higher education, a discussion of these institutions is not included in this volume

¹See statistical reports of the U. S. Bureau of Education.

because the data regarding them do not yield readily to statistical treatment.

The most important single aim of the colleges and universities of Disciples of Christ appears to be the continuation and extension of the faith of the communion. This philosophy is revealed in their educational programs and also in such matters as the church memberships of students, the training of the faculty, and the church membership of the teaching staff. Courses in religion are still required of all students in a majority of the Disciples institutions, and, with practically no exceptions, these courses are taught by teachers who are members of the communion. These colleges draw largely upon the graduates of Disciples institutions for their faculties, and a large percentage of the staff members are of the faith of Disciples of Christ. This is true particularly of the teachers of Bible and religious education, and of the presidents of the colleges.

An additional way whereby the tradition of Disciples institutions is being maintained is by an interchange of presidents. Data obtained from the catalogs of the institutions give evidence of such cross-relationships.

Environmental Influences

Although established as a result of the inner convictions of a religious communion, and for the purpose of providing training for the leadership of the religious group, the institutions have, to a considerable extent, been moulded by the educational world around them. Relatively recently a majority of these institutions, particularly the older ones, have standardized their work and organized their program to fit into the educational system of which they are a part.

Throughout the years Disciples have offered education at a relatively low cost to the student. In most instances the institutions have required simplicity in personal habits. The educational programs have been built around a few fundamental subjects such as Bible, foreign language, mathematics, and science. Recently, marked changes have occurred in the pattern of some of the colleges and universities, due to the fact that

these institutions have not been free to follow their own development. The increase of high school facilities has resulted in less need for privately supported preparatory schools and more need for increased facilities for higher education. Standardizing agencies have made requirements which institutions must meet or cease to exist. The increased cost of education has necessitated increased fees from the students. This development has been accompanied by increased personal expenditures upon the part of the students, which, in turn, have been made possible by an increase in the economic ability of the constituencies supporting these institutions.

The most obvious modification in the pattern of those institutions of the group located in cities is a result of their location. It is true that some have remained small institutions for a half century or more, varying little from a certain prescribed educational form. However, others have grown into universities to meet the needs of modern American cities. Indianapolis is a city of approximately 400,000; Butler College in Indianapolis has developed into Butler University. Des Moines is a city of considerably more than 100,000. Drake University in that city is composed of a number of professional schools in addition to a college of liberal arts. Texas Christian University is located in Fort Worth, one of the most rapidly growing cities of the South. During recent years this university has grown even more rapidly than the city in which it is located. Phillips University is located at Enid, Oklahoma, a rapidly growing city of approximately 25,000. Each of the four institutions mentioned above has more than one thousand different students enrolled each year, and some of them have more than two thousand students.

Institutions have been modified to a considerable extent by the influences of the state-supported education in the states in which they are located. State departments of education in most states grant teachers' certificates to college graduates and former college students only under certain specified conditions. These conditions almost always operate to strengthen the staff, the endowment and the equipment of the colleges.

The requirements of a professional nature have resulted in greatly increasing the departmental offerings and enrolments in the department of education. These requirements have also led a number of the institutions to establish summer-schools.

State universities have also been very effective in modifying the programs of non-public institutions. The decision as to the value of the credits of private colleges not members of regional standardizing associations is almost always left to the state university of the states in which these institutions are situated.

The six junior colleges of Disciples of Christ are located in three states, Kentucky, Texas, and Missouri. Five of these institutions are colleges for young women. The South has lacked money to support higher education to the extent that it has been supported in the North, East, and West, and as a result, education has until recently been limited largely to the socially superior class. The South has also tended to separate the education of the sexes. The conception of the South with respect to the personality of woman and her function in society is expressed in a scheme of education for women different from that obtaining in other parts of the United States. This conception of education was expressed originally in the girls' finishing school; it has survived as the Southern girls' college.

The Field Offered

The writers are of the opinion that four-year Christian colleges at the present time constitute an important part of the American system of higher education, principally because the state-supported institutions are not now in position to furnish college education to all those who desire it. After the position of the college controlled by a religious group has been granted, the work of the group of institutions of this type holding membership with the Board of Education of Disciples of Christ must be evaluated. There are some individuals imbued with the missionary spirit who believe that a college can be justified upon the basis of the ends it serves as an institution for promoting religious training. Their conception of a church col-

lege is that of an institution which may or may not provide educational training of a high grade, but which must provide a religious environment. The writers do not agree with this point of view. The institution must fulfill reasonably well the function of a college; otherwise it is difficult to justify its continued existence. It must achieve certain educational standards, and, wherever possible, it should strive for worthy individuality in educational expression.

It is also difficult to justify the existence of church-supported colleges unless these institutions make contributions to higher education of a type which state-supported institutions are not making. The private colleges should not duplicate the work of the state institutions, but should supplement their work. Privately supported institutions, if adequately financed, have opportunities to express their individuality to an extent not possible for institutions supported by state funds and responsible to state legislatures for support. All state universities are more or less similar in form since they are designed to meet the varied needs of the states in which they are situated. Likewise, state-supported teachers' colleges and normal schools resemble each other in many respects regardless of where they are situated. Similarity of this type is neither necessary nor desirable among colleges supported by a religious group. Yet to a considerable degree the Disciples institutions are similar in form and purpose. They differ little one from another except in size.

Contributions Made

The colleges of Disciples of Christ have made certain contributions to higher education in general, and other contributions to the religious communion of which they are a part. These points will now be discussed in order.

The Disciples colleges have made practically no purely technical educational contribution to national life. Educational results in technical fields are largely dependent on financial resources, and these colleges have had relatively small funds

with which to work. The religious constituency supporting them has, until very recently, kept them as a group on a financial basis which would prevent any outstanding educational contribution to national life.

As a piece of national service these colleges have contributed most in the fields of religion and education. Some of them may expect to continue, as a piece of national service, the more or less permanent occupation of the field of religion, provided they are able adequately to finance themselves and to adjust their program to fit into a system of higher education modified by the entrance of the junior college and consisting principally of state-supported institutions.

Whether the service rendered by non-public colleges as training schools for teachers is to be only temporary, or is to continue over a period of many years, is debatable. However, the importance of these institutions as training schools for teachers has increased greatly during recent years, as has been indicated by the percentages of graduates entering the teaching profession. Certainly for a number of years to come the colleges and universities supported by religious bodies will continue to render service in the field of teacher-training work. To render this service in an acceptable manner these institutions must not only keep pace with the modern educational trends, but must also meet fully the requirements of state departments of education and of regional standardizing agencies.

Careful studies have shown that colleges in general have a relatively local drawing power, a large percentage of their students coming from within a radius of fifty miles.¹ A considerable number of the colleges of Disciples of Christ fill a local need. Many of them are situated in regions which have either inadequate college facilities or no facilities at all.

Other contributions to higher education which might be claimed for the Disciples institutions are: (1) the first insistence upon the Bible as the core subject of the curriculum of the

¹Data on this point will be presented in Chapter II.

Christian college; (2) early adoption of the idea of co-education; (3) the establishment of Bible chairs and schools of religion in connection with tax-supported colleges and universities; (4) the first establishment of professorships and departments of religious education.

Besides these contributions to higher education in general, the colleges have also rendered certain rather definite service to the religious body. A communion values a college more by its work in the continuation and extension of the faith than by any other service which it renders. By this test of efficiency, the institutions of Disciples of Christ rank high. Almost all of the newer colleges were founded by graduates of the older institutions belonging to the same communion. It has already been mentioned that a majority of the presidents and instructors of religious education, and a large percentage of the instructors in other branches of learning, received their training at the colleges of the communion. The relatively high percentage of students of these colleges who hold membership in the supporting communion indicates in a measure the extent to which these institutions are meeting the demands of their religious constituency. The core department of almost all of the four-year institutions is Bible and religious education. Almost all of the institutions have developed plans for aiding those contemplating the ministerial or missionary field as a vocation, and also for aiding children of ministers and missionaries. Almost all of these institutions teach an extraordinarily large amount of work in Bible and in other subjects of religious education, as compared with the amount taught by colleges of most other communions.

Summary

There is necessary a clear understanding of the setting and background of an institution of higher learning before the application of principles of organization and administration can be undertaken. Some of the items composing this background, which have been discussed, are: (1) supporting con-

stituency; (2) founding and early history; (3) relationship to other educational institutions; (4) character of work attempted; (5) environmental influences; (6) the field offered; (7) contributions made. The significance of these various items of background has been illustrated by data regarding the group of institutions supported by Disciples of Christ.

CHAPTER II

THE SERVICE OF HIGHER EDUCATIONAL INSTITUTIONS

Types of Service Rendered

The general functions performed by state-supported institutions of higher education may be classified into four distinct activities: (1) teaching students on the campus; (2) carrying on research for the advancement of learning by members of the faculties; (3) extending the educational resources of the institutions to those people of the commonwealth who are not enrolled as residence students in institutions of higher learning; (4) maintaining libraries and museums. The programs of higher education maintained by denominational institutions is, in general, supplementary to the programs of the state-supported institutions in the several states in which these institutions are situated.

With the exception of some of the Disciples Foundations at state universities, all of the Disciples colleges are teaching institutions. Research receives little attention at any of the institutions. Likewise, the function of extending the educational resources of the institution to the people of the state not enrolled as resident students, also receives little attention at these colleges and universities. A few of the institutions carry on a small amount of extension work; most of them limit their teaching activities entirely to resident instruction. All of the institutions maintain libraries and some of them have museums.

No one of the states in which Disciples institutions are situated now provides adequate funds with which to maintain high grade and thoroughly satisfactory teaching facilities for all of the young people of the state who are seeking the advantages of higher learning. Consequently, in maintaining teaching activities and providing libraries and museums the institutions supported by religious groups should not be thought of as

duplicating the work of state-supported institutions; the services which these institutions render are supplementary to those performed by the state-supported institutions.

In addition to the performance of functions of the types mentioned above, church colleges render other valuable services as well. Few state-supported institutions attempt to provide religious instruction; the separation of the church from the state does not permit of such a program. Even though legal enactments should not forbid religious instruction in state schools, such a program might easily result in constant friction. Complete separation of the church and state makes difficult, if not impossible, the provision for direct religious instruction in the state schools. At the present time the responsibility for formal religious instruction falls almost entirely upon the church.

One of the fundamental aims of church institutions is to provide a religious environment and religious training for young people while they are students. The Disciples institutions located at the campuses of state universities supplement the work of the universities by providing such an environment and by imparting moral and religious instruction to the university students. An additional function of some of these institutions is specifically to train young men and women for religious work in the ministry, upon the mission field, or in other spheres of Christian service. The Bible College of Missouri is an example of a church-supported institution at a state university, which offers training to young men and women specializing in the field of religion.

Colleges and universities which are separate from the state institutions not only render services of the type rendered by the religious institutions at the state universities, but also provide secular education at the college level. Both the independent church colleges and the schools of religion and religious foundations at state universities have developed as a result of the conviction upon the part of church leaders that religion should be an intrinsic part of education. Since the American principle of separation of the church and state has rendered it

difficult, if not impossible, for the state to care adequately for the religious life of the students, the church has accepted the responsibility of establishing a second system of schools, established either as independent colleges or as institutions alongside of the state institutions, cooperating with the state institutions and supplementing the general state education. Both types of institutions are maintained by Disciples of Christ. These institutions represent the results of a conviction that religion must be made a genuine part of the educational experience of the individual.

The Growth of the Institutions

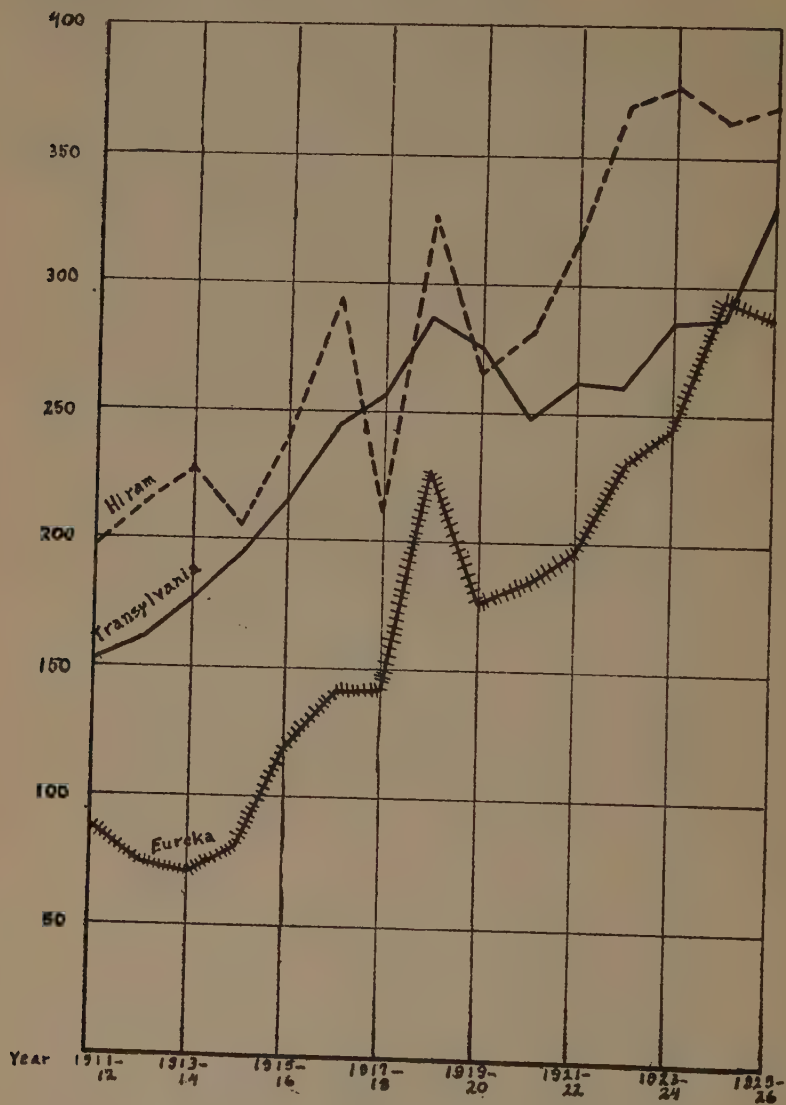
The growth of eight of the colleges surveyed, for which data over a period of years are available, is shown in Table 1. Due to the fact that uniform enrolment statistics for five of these eight institutions are not available over the entire period of years represented, the total enrolments for the eight institutions, shown in the last column of the table, are presented for a period of six years only. The data for three of the institutions are presented graphically in Figure 1.

TABLE 1. REGULAR TERM STUDENTS ENROLLED AS FRESHMEN, SOPHOMORES, JUNIORS OR SENIORS

	TRANSYL-		LYNCH-		BETH-	CULVER-	COT-	ATLANTIC	
	VANIA	EUREKA	HIRAM	BURG	ANY	STOCKTON	NER	CHRISTIAN	TOTAL
1911-12	153	89	197						
1912-13	158	75	215						
1913-14	177	70	227						
1914-15	194	80	205						
1915-16	215	118	240						
1916-17	245	139	294						
1917-18	257	140	211						
1918-19*	286	228	325	87		35			
1919-20	275	175	265	122		63	119		
1920-21	248	183	280	125	339	94	138	43	1450
1921-22	261	197	315	124	274	127	187	56	1541
1922-23	259	230	367	180	266	135	180	98	1715
1923-24	285	243	375	197	300	193	233	112	1938
1924-25	286	294	362	196	284	202	234	139	1997
1925-26	331	288	369	232	300	260	250	139	2169

*Data for 1918-19 include S. A. T. C. students.

FIG. 1. TREND OF ENROLMENTS OF THREE INSTITUTIONS (HIRAM, TRANSYLVANIA, AND EUREKA)
ENROLMENTS



An examination of the data presented in Table 1 shows that considerable increases have occurred during recent years in the numbers of college students enrolled in the institutions represented. Since 1911-1912 the number enrolled who are classified as college students has increased 118 per cent at Transylvania College, 223 per cent at Eureka College, and 87 per cent at Hiram College. From 1920-1921 to 1925-1926 the enrolment of classified college students at the eight institutions combined has increased approximately 50 per cent. However, in the two academic years that have elapsed since these data were gathered, six of the eight institutions represented in this table have shown marked decreases in enrolments. Whether these decreases are a temporary condition, or whether they represent a significant trend, remains to be seen. The curve of growth is also modified by the fact that a few of the institutions limit their enrolment.

High School Graduates and College Enrolments

Table 2 shows for the United States and for each of the fifteen states having institutions affiliated with the Board of Education of Disciples of Christ, the percentage of the students enrolled in elementary and high schools who are enrolled in high schools, and the percentage of high school graduates continuing their education the year following graduation. These data are shown for 1910, 1920, and 1924.

An examination of Table 2 shows that the percentage of pupils attending high school in the United States increased approximately 100 per cent from 1910 to 1924. In Alabama, Oklahoma, and West Virginia, the number of pupils attending high school increased more than 200 per cent. The increase in Nebraska was the lowest among the fifteen states, being slightly less than 50 per cent.

Considerable variation occurs among the states during each of the years shown, and in the same state during different years with respect to the percentage of high school graduates continuing their education the year following graduation. This percentage ranged in 1910 from 43.3 per cent for Ken-

TABLE 2. PERCENTAGE OF STUDENTS ENROLLED IN ELEMENTARY AND HIGH SCHOOLS WHO ARE ENROLLED IN HIGH SCHOOLS AND THE PERCENTAGE OF HIGH SCHOOL GRADUATES CONTINUING THEIR EDUCATION THE YEAR FOLLOWING GRADUATION

STATE	PERCENTAGE OF ATTENDANCE IN HIGH SCHOOL			PERCENTAGE OF HIGH SCHOOL GRADUATES CONTINUING THEIR EDUCATION NEXT YEAR		
	1910	1920	1924	1910	1920	1924
United States	7.1	10.2	14.0	48.9	40.9	44.8
Alabama	3.0	6.2	9.6	61.2	44.1	49.9
California	12.3	23.4	30.2	50.3	40.4	40.4
Illinois	8.1	11.3	16.5	44.9	36.7	38.5
Indiana	10.4	13.9	18.1	50.5	45.9	46.6
Iowa	11.0	10.1	17.9	46.9	36.9	38.4
Kentucky	3.1	4.4	7.2	43.3	46.7	55.2
Missouri	6.7	10.7	13.5	46.7	38.0	42.6
Nebraska	10.2	10.0	15.0	51.2	33.6	31.8
North Carolina	2.6	4.5	5.1	70.8	51.0	64.0
Ohio	9.7	13.1	18.2	45.0	41.9	44.7
Oklahoma	3.3	7.2	12.0	56.0	36.6	50.4
Texas	5.6	10.4	14.8	59.5	51.3	56.0
Virginia	4.4	6.1	8.9	51.1	52.1	60.1
Washington	11.9	14.9	19.4	62.1	44.2	44.1
W. Virginia	2.1	6.2	7.5	57.7	39.9	50.2

tucky to 70.8 per cent for North Carolina; in 1920, from 33.6 per cent for Nebraska to 52.1 per cent for Virginia; in 1924, from 31.8 per cent for Nebraska to 64.0 per cent for North Carolina. For the United States the percentage of high school graduates continuing their education decreased from 1910 to 1918, increased from 1918 to 1922, and then decreased again from 1922 to 1924. From 1910 to 1924 the percentage of high school graduates continuing their education decreased only 4, although the percentage of attendance in high school practically doubled. During this period only two of the fifteen states represented in the table showed increases in the percentage of high school graduates continuing their education; these states were Kentucky and Virginia.

A comparison of the percentages of attendance in high school with the percentages of high school graduates continuing their education the following year shows that an inverse relationship exists between high school attendance and high

school graduates continuing their education. For the fifteen states represented in the table, the five states having the larger percentages of attendance in high school have, for each of the years for which data are given, a smaller percentage of their high school graduates continuing their education the following year than the average percentage continuing their education in the five states having the smaller percentages of attendance in high school. The median percentages of graduates continuing their education for the five states having the smaller, and the five states having the larger percentages of attendance in high school, respectively, are as follows: in 1910, 57.7 per cent in the states having the smaller percentages of attendance in high school and 51.2 per cent in the states having the larger percentages of attendance in high school; in 1920, 46.7 per cent in the states having the smaller percentages of attendance in high school and 41.9 per cent in the states having the larger percentages of attendance in high school; in 1924, 52.2 per cent in the states having the smaller percentages of attendance in high school and 44.1 per cent in the states having the larger percentages of attendance in high school.

Although an inverse relationship exists between the percentage of attendance in high school and the percentage of high school graduates continuing their education, this relationship is not marked. However, the relationship between the number of students attending high schools and the number of graduates continuing their education is marked. This is indicated by the fact that during the period that the attendance in high schools doubled, the percentage continuing their education decreased only four per cent.

The data presented in Table 2 would indicate that continued growth may be expected in enrolments in institutions of higher education. Apparently the saturation point of college enrolments is far from being reached in any of the states for which data are presented, with the possible exception of California. The continued expansion of the secondary school may be expected to result in increasing numbers of high school graduates seeking entrance to institutions of higher learning.

Religious Affiliations of Students

Table 3 shows for each of fourteen institutions for which data were available the number and the per cent of students affiliated with Disciples of Christ. Affiliated students include those indicating Disciples of Christ as the church of their preference, as well as those holding membership with that communion. Figure 2 shows the same data graphically.

TABLE 3. DISCIPLES OF CHRIST STUDENTS IN FOURTEEN INSTITUTIONS

INSTITUTION	YEAR	NUMBER OF DISCIPLES STUDENTS	PER CENT OF ENTIRE ENROLMENT
Cotner College	1924	203	85.6
Bethany College	1926	202	77.9
Eureka College	1925	218	71.2
Transylvania College	1925	225	71.0
Lynchburg College	1925	147	69.3
Hiram College	1924	244	66.5
Spokane University	1927	85	65.4
Culver-Stockton College	1925	125	63.7
Randolph College	1927	61	58.4
Atlantic Christian College	1926	81	58.3
Christian College	1926	148	56.7
Phillips University	1924	639	54.2
William Woods College	1926	128	53.0
California Christian College	1927	128	33.8
Average		188	60.9

A study of Table 3 reveals the fact that sixty per cent of the students in attendance at the fourteen colleges listed are affiliated with the supporting communion. However, if the percentages for the larger Disciples institutions, such as Drake, Butler, and Texas Christian Universities could have been obtained and included in Table 3, it is believed that the average percentages shown in this table would be materially reduced.

Geographical Distribution of Alumni

Table 4 shows the geographical distribution of the alumni of five of the colleges for which data of this type are available.

This table shows that the per cent of alumni of the several colleges residing in the states in which the institutions are situated range from 38 for Transylvania College to 69 for Lynchburg College. For the five institutions, combined, only 50 per

FIG. 2. PER CENT OF STUDENTS ENROLLED IN EACH OF FOURTEEN INSTITUTIONS, WHO ARE AFFILIATED WITH THE SUPPORTING COMMUNION (DISCIPLES OF CHRIST)

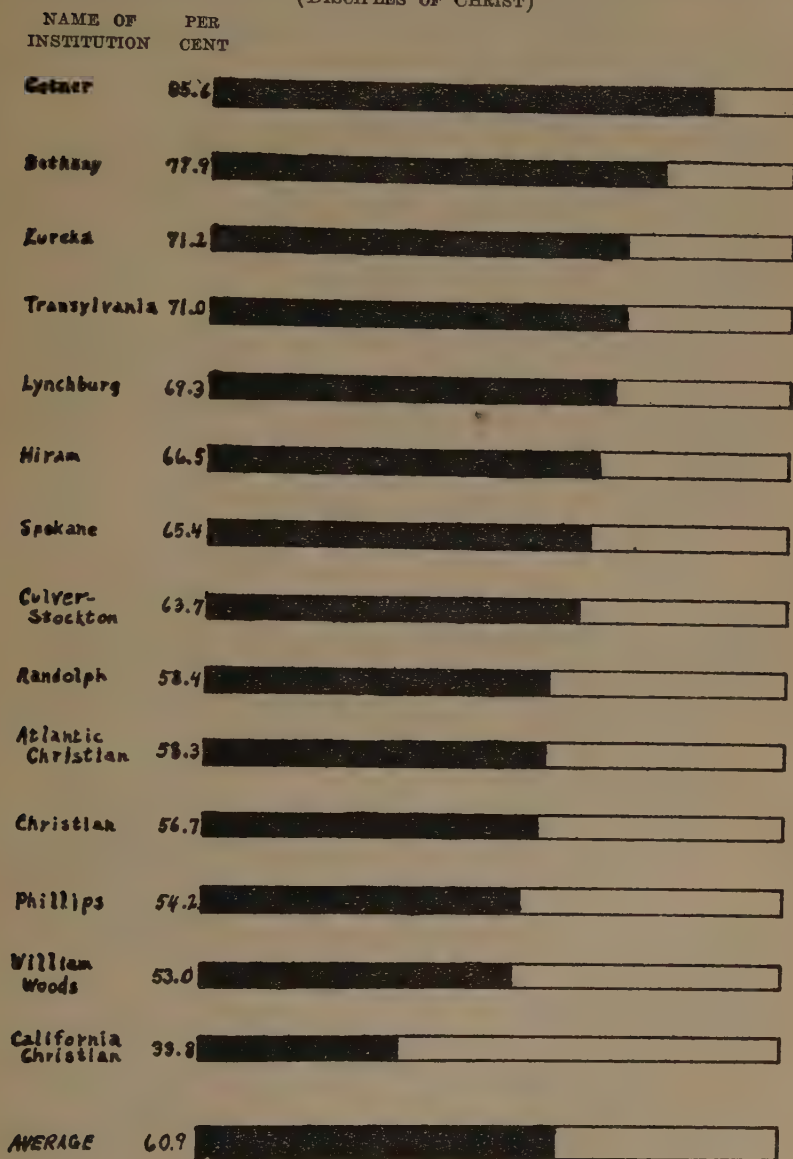


TABLE 4. GEOGRAPHICAL DISTRIBUTION OF ALUMNI OF FIVE COLLEGES

COLLEGE	RESIDING IN HOME STATE OF THE COLLEGE		RESIDING IN OTHER STATES		RESIDING IN FOREIGN COUNTRIES	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Transylvania	341	38	532	59	23	3
Culver-Stockton	158	42	171	45	13	3
Hiram	583	51	497	44	55	5
Eureka	285	53	235	44	15	3
Lynchburg	319	69	135	30	5	1
Total	1686	50	1570	47	111	3

cent of the alumni reside in the states in which the institutions from which they graduated are located.

Occupational Distribution of Alumni

Alumni data are the most unsatisfactory of all statistics relating to educational institutions. Data relating to occupations unknown, women in home making, those engaged in further study, and those deceased are very often sources of error. It is difficult to interpret those data which are available due to the possibilities of error and the incompleteness of the data which exist.

Table 5 shows the occupational distribution of the alumni of Butler University, Transylvania College, Hiram College, and Eureka College, combined, for six decades from 1860 to 1919. These data were compiled by the Council of Church Boards of Education as a part of a study made for the Board of Education of Disciples of Christ.

TABLE 5. OCCUPATIONAL DISTRIBUTION OF ALUMNI OF FOUR INSTITUTIONS,¹ FROM 1860 TO 1919

YEAR	TOTAL NO.	RELIGIOUS SERVICE		EDUCATION		OTHERS		DEAD AND UNKNOWN	
		NO.	%	NO.	%	NO.	%	NO.	%
1860-69	289	19	7	14	5	142	49	114	39
1870-79	344	32	9	17	5	186	54	109	32
1880-89	389	65	17	47	12	187	48	90	23
1890-99	932	185	20	132	14	432	46	183	20
1900-09	785	180	23	190	24	351	45	64	8
1910-19	1012	212	21	365	36	398	39	37	4
Total	3751	693		765		1696		597	
Average			19		20		45		16

¹The four institutions are Butler University, Transylvania College, Hiram College and Eureka College.

Figure 3 shows the occupational distribution of the graduates of three colleges combined. The professions and occupations listed are those which the students entered immediately after graduation. While the colleges selected may not represent a situation typical of that of the larger denominational institutions, yet there appears little reason to think that occupational distribution of the alumni of the small colleges as a group would differ greatly from that represented in Figure 3.

The data presented in Table 5 and Figure 3 point in the direction of certain tendencies, although, due to their partial nature, they are by no means conclusive. For the years prior to 1900 the data are difficult to interpret because of the large percentage of alumni listed as dead and unknown. The relatively small numbers listed in the fields of religion and education may be due in part to inadequate data, in part to a tendency for those entering these professions to transfer to other professions, and possibly, in part to the fact that smaller numbers entered these professions during the earlier years. For the years after 1900 the data in the two tables seem to check rather closely. Practically all living alumni of the institutions represented are included in the data of Table 5. The percentages of dead and unknown shown for the later years are so small that they do not seriously complicate the interpretation of the data presented.

An examination of the data presented in Figure 3 shows that considerable changes have occurred in the professions and occupations for which the graduates of the three colleges represented are being trained. The percentage of graduates entering the field of education was more than three times as great during the period from 1920 to 1924 as during the period from 1900 to 1909. A similar tendency appears at the institutions represented in Table 5. However, the percentage entering religious service shown in Figure 3 decreased¹ from 23.9 during the period from 1900 to 1909, to 18.8 during the period from 1920 to 1924. A slight decrease also occurred in the percent-

¹Unpublished data gathered by H. O. Pritchard indicate that in the years since 1924 there has been an increase in the per cent of graduates entering the field of religious service.

FIG. 3. COMPARATIVE PER CENTS OF GRADUATES OF THREE COLLEGES
(EUREKA, CULVER-STOCKTON, AND LYNCHBURG) WHO ARE ENGAGED IN
VARIOUS OCCUPATIONS

COMMERCIAL PURSUITS

Graduates of 1900-1909 - 5.6

Graduates of 1910-1919 - 4.9

Graduates of 1920-1924 - 7.7

EDUCATION

Graduates of 1900-09 - 14.3

Graduates of 1910-19 - 26.9

Graduates of 1920-24 - 49.4

LAW

Graduates of 1900-09 - 5.1

Graduates of 1910-19 - 2.3

Graduates of 1920-24 - .3

RELIGIOUS SERVICE

Graduates of 1900-09 - 23.9

Graduates of 1910-19 - 22.8

Graduates of 1920-24 - 18.8

MEDICINE

Graduates of 1900-09 - .5

Graduates of 1910-19 - 1.6

Graduates of 1920-24 - .3

OTHERS

Graduates of 1900-09 - 51.6

Graduates of 1910-19 - 41.5

Graduates of 1920-24 - 23.5

age entering the field of religious service during the period from 1910 to 1919 at the institutions represented in Table 5.

In interpreting these data it should be remembered that a decrease in the percentage of graduates entering the field of religious service does not represent a decrease in the actual number of individuals entering this field. In fact, the increasing number of graduates of these colleges from year to year has actually resulted in a considerable increase in the number of young people entering the field of religious work, regardless of the fact that the percentage of all graduates entering this field is smaller now than formerly. Other facts worthy of notice in the data presented in Figure 3 are the small percentage of the graduates entering the profession of law during recent years, and also the small percentage entering the profession of medicine throughout the entire period represented.

Possibly the most important conclusion which may be derived from the data relating to occupations of alumni concerns the nature of the alumni data available. The institutions represented in the two tables are among those with more complete data, yet these data are so incomplete that final conclusions relating to trends with respect to alumni occupations are impossible. It would be worth while for institutions to keep in their permanent files data relating to the occupations of graduates immediately following graduation, as well as data relating to later occupations.

The Drawing Power of Institutions

Table 6 shows, for each of ten institutions, the per cent of students enrolled residing within a radius of fifty miles of the institution attended. In the case of each institution the data from which the per cent is computed are for the year during which the survey of the institution was made.

Most colleges are very largely dependent, both for students and for financial support, upon constituencies residing relatively near the respective institutions. Many of the largest universities of America receive more than half of their students from within a radius of fifty miles, and from eighty to

TABLE 6. PER CENT OF STUDENTS ENROLLED RESIDING WITHIN A RADIUS OF FIFTY MILES OF THE INSTITUTION ATTENDED

INSTITUTION	PER CENT RESIDING WITHIN FIFTY MILES
William Woods College	32
Spokane University	32
Cotner College	40
Christian College	41
Lynchburg College	43
Bethany College	50
Randolph College	50
Transylvania College	55
Hamilton College	59
Phillips University	62
California Christian College	62
Hiram College	68
Culver-Stockton College	72
Atlantic Christian College	83

ninety per cent of their students from within the states in which the respective institutions are located.

Data showing the number of states represented in the student bodies of thirteen institutions are shown in Table 7.

TABLE 7. NUMBER OF STATES REPRESENTED IN THE STUDENT BODIES OF THIRTEEN INSTITUTIONS

INSTITUTION	NUMBER OF STATES REPRESENTED IN STUDENT BODY	YEAR
Transylvania College	24	1924-25
Phillips University	23	1923-24
Bethany College	21	1925-26
William Woods College	18	1925-26
Hiram College	16	1924-25
Eureka College	15	1926-27
Cotner College	14	1923-24
Christian College	13	1925-26
Lynchburg College	12	1924-25
Culver-Stockton College	9	1924-25
California Christian College	7	1926-27
Spokane University	7	1926-27
Randolph College	4	1926-27

An examination of this table shows that the range in the number of states from which these institutions receive students is from four, at Randolph College, to 24, at Transylvania College. Old and well established institutions draw students from a larger number of states than institutions which

have been established more recently; however, the percentage of students enrolled, who reside within a radius of fifty miles of an institution, bears little relation to the age of the institution.

It appears probable that the extremely high percentages of students of Atlantic Christian College and Culver-Stockton College residing within fifty miles of these institutions is due primarily to two causes. The first of these causes is the lack of local competition from other colleges; the second is the lack of accreditation, or the very recent accreditation, of these institutions by the regional accrediting associations in the territory in which they are located. Atlantic Christian College has not yet been accredited, while the accreditation of Culver-Stockton College is a relatively recent matter. Students rarely attend unaccredited institutions located at a distance from their homes. However, even though Atlantic Christian College should become a standard institution, so long as it remains at Wilson, it appears probable that its clientele will remain largely local because of the lack of competition.

Principles Affecting the Location of Institutions

The future of a denominational college depends to a considerable extent upon its location. An institution with limited resources and a limited church constituency must depend for its support primarily upon a local clientele not connected with the supporting communion. As a part of the survey of Atlantic Christian College one of the writers was requested to recommend a permanent location for the institution. The techniques developed in this study are presented in some detail.

An intelligent decision as to the desirability of a city as the location of a college can be made only after consideration has been given to the services which the institution can render to the higher educational program of the state as well as to its church constituency. These two points will be compared in order as they affect the location of Atlantic Christian College.

In the case of this institution three possible locations were considered, Wilson, Rocky Mount, and Raleigh. Table 8 lists ten factors which affect the desirability of the various locations, considered from the point of view of the service which the institution can render to the program of higher education in the state. Opposite each factor is given in parallel columns the ranks for each of the three locations considered with respect to desirability upon this factor.

TABLE 8. CITIES RANKED WITH RESPECT TO DESIRABILITY AS LOCATIONS FOR ATLANTIC CHRISTIAN COLLEGE, FROM THE POINT OF VIEW OF SERVICE WHICH THE INSTITUTION CAN RENDER TO THE PROGRAM OF HIGHER EDUCATION IN NORTH CAROLINA¹

FACTORS UNDER CONSIDERATION	RANK OF WILSON	RANK OF ROCKY MOUNT	RANK OF RALEIGH
1. Location of Competing Institutions	1½	1½	3
2. Location of Competing Four-Year Colleges	1½	1½	3
3. White Population per Competing Institution	1½	1½	3
4. White Population per Competing Four-Year College	1½	1½	3
5. High School Population per Competing Institution	1½	1½	3
6. High School Population per Competing Four-Year College	1½	1½	3
7. Distance From the Homes of Students	1	2	3
8. Accessibility as Determined by Railway Facilities	2	2	2
9. Accessibility as Determined by Automobile Highways	2	2	2
10. Ability of Local Constituency to Support Education	1½	1½	3
Total of Ranks	15½	16½	28
Final Rank Upon the Basis of Ten Factors	1	2	3

¹The city situated most favorably with respect to each factor under consideration receives a rank of 1, while the city situated least favorably receives a rank of 3. In cases where two cities tie for first place, each receives a rank of 1½; in cases where the location of each of the three cities is considered equally desirable, each receives a rank of 2.

The technique for assigning the ranks on the various factors is illustrated by the presentation of the various considerations that led to the ranking on factor number 10. This factor refers to the ability of the local constituency to support education.

No one criterion of the ability of a community to support education is, in itself, satisfactory. Possibly the most significant criterion is a weighted combination of the most important criteria that have desirable elements. Two of the most important criteria are property values and income. There are wide divergences between property values and income earned in the several counties of North Carolina; consequently, a combination of property values and income tax paid constitutes an index of economic ability more truly representative than is the single measure of property values. Such an index may be derived from the data appearing in Table 9. This table presents data showing, for three communities suggested as locations for Atlantic Christian College, the variations with respect to ability to finance education, as indicated by property valuation and income tax paid.

TABLE 9. ABILITY TO FINANCE EDUCATION AS SHOWN BY PROPERTY VALUATION AND INCOME TAX PAID

COUNTIES WITH MORE THAN HALF THEIR AREA WITHIN FIFTY MILES OF	WHITE POPULA- TION	VALUATION OF ALL PROP- ERTY LISTED AND ASSESSED FOR TAXATION; AVERAGE FOR 1920 AND 1923		STATE INCOME TAX PAID (BY INDIVIDUALS AND CORPORATIONS) 1923	
		PER CAPITA		PER CAPITA	
		TOTAL	POPULATION (WHITE)	TOTAL	POPULATION (WHITE)
Wilson	244,837	\$560,822,545	\$2,291	\$437,521	\$1.79
Rocky Mount	298,863	623,102,243	2,085	478,236	1.60
Raleigh	345,608	621,789,109	1,799	720,233	2.08

From the data included in Table 9, it will be observed that the area surrounding Rocky Mount has the greatest total property valuation; that surrounding Raleigh, the next greatest total property valuation; and that surrounding Wilson the least total property valuation. However, in property valuation per capita of the white population, Wilson and adjacent territory ranks first, Rocky Mount and adjacent territory ranks second, and Raleigh and adjacent territory ranks third. In total state income tax paid, the territory surrounding Raleigh ranks first, that surrounding Rocky Mount ranks second, and that surrounding Wilson ranks third. In income tax paid per

capita of the white population, Raleigh and adjacent territory, also, ranks first. However, when reduced to the per capita basis, the order of Wilson and Rocky Mount is reversed from their order when ranked upon the basis of total state income tax paid.

Table 10 illustrates the variations in the ability of these three territorial areas to finance education as shown by an index of economic ability. The technique employed in computing this index is similar to that used by Morrison.¹ This index represents the income tax paid in 1923 plus one one-hundredth of the average property valuation for 1920 and 1923.

TABLE 10. ABILITY TO FINANCE EDUCATION AS SHOWN BY AN INDEX OF ECONOMIC ABILITY

COUNTIES WITH MORE THAN HALF THEIR AREA WITHIN 50 MILES OF	TOTAL WHITE POPULATION	NUMBER OF COMPETING INSTITUTIONS WITHIN A 50 MILE RADIUS	NUMBER OF COMPETING FOUR-YEAR COLLEGES WITH- IN A 50 MILE RADIUS	INDEX OF ECONOMIC ABILITY			
				TOTAL	PER CAPITA WHITE POPULATION	PER COMPETING INSTITUTION	PER COMPETING FOUR- YEAR COLLEGE
Wilson	244,837	8	3	\$6,045,746	\$24.69	\$755,718	\$2,015,249
Rocky Mount	298,863	8	3	6,709,258	22.45	838,657	2,236,419
Raleigh	345,608	10	6	6,938,124	20.07	693,812	1,156,354

In total economic ability, as shown by the data presented in Table 10, Raleigh ranks first, Rocky Mount second, and Wilson third; in economic ability per capita of the white population, Wilson ranks first, Rocky Mount second, and Raleigh third; while, in economic ability per competing institution, as well as in economic ability per competing four-year college, Rocky Mount ranks first, Wilson second, and Raleigh third. Since economic ability per capita, economic ability per competing institution, and economic ability per four-year college are all factors more important than total economic ability in determining the actual ability of a constituency to support an in-

¹Morrison, Fred W., "Equalization of the Financial Burden of Education Among Counties in North Carolina," Bureau of Publications, Teachers College, Columbia University, 1925.

stitution, Raleigh must be ranked third in the ability of its local area to support Atlantic Christian College. It is much more difficult to rank Wilson and Rocky Mount in this respect, because the important factors to be considered are conflicting. Although Wilson and its surrounding territory has the greater economic ability per capita, Rocky Mount and its surrounding territory has the greater economic ability per competing institution, as well as the greater economic ability per competing four-year college. After giving due consideration to all of these factors, it appears probable that the difference in the actual economic ability of Wilson and Rocky Mount to support Atlantic Christian College is so small as to be negligible. Consequently, these cities are given equal rank with respect to ability to support the institution.

By a somewhat similar process the ranks of the three locations on each of the other factors were determined, with the result already indicated in Table 8.

Thus far there has been considered only the question of service to the program of higher education of the state as it affects the location of the institution. The service to be rendered in the future to the communion which it represents must also be considered. This, too, is largely dependent upon the location of the institution. To render maximum service the college must be located in that city which will be most easily accessible to the homes of the supporting church constituency, Disciples of Christ, in North Carolina. In this connection, South Carolina is not considered because the Disciples residing in that state are few in number. Furthermore, few students, and a very small percentage of the financial support of the college, come from South Carolina.

Four factors are considered in connection with the service to be rendered the communion. The desirability of each of the proposed locations is ranked by a method similar to that already illustrated. The results of this ranking are shown in Table 11.

TABLE 11. CITIES RANKED WITH RESPECT TO DESIRABILITY AS LOCATIONS FOR ATLANTIC CHRISTIAN COLLEGE, FROM THE POINT OF VIEW OF THE SERVICE WHICH THE INSTITUTION MAY RENDER TO THE SUPPORTING COMMUNITY¹

FACTOR UNDER CONSIDERATION	RANK OF WILSON	RANK OF ROCKY MOUNT	RANK OF RALEIGH
1. Distance from the Center of Disciples Population in North Carolina	1½	1½	3
2. Disciples Within a Fifty-Mile Radius	1½	1½	3
3. Distance from Center of Disciples Congregations in North Carolina	1	2	3
4. Disciples Congregations Within a Fifty-Mile Radius	1	2	3
Total of Ranks	5	7	12
Rank upon basis of four factors	1	2	3

¹See footnote to Table 8.

Therefore, it may be concluded that Wilson is slightly more satisfactory as a location for Atlantic Christian College than Rocky Mount, and very much more satisfactory than Raleigh, not only from the point of view of the service which the institution can render to the program of higher education in North Carolina, but, also, from the point of view of the service which it can render to its denominational constituency.

In the light of the above considerations, the board of control has decided to locate the institution permanently at Wilson.

Summary

Denominational colleges usually limit their programs to the single function of teaching students, without attempting the more varied functions, common to state-supported institutions, of research, university extension service, and the maintenance of public libraries and museums. Particularly valuable is the work of the church colleges in providing religious instruction, in maintaining a religious environment, and in giving specific training for religious work. This program of religious influence is maintained at the separate colleges offering regular instructional work, but becomes particularly significant at the institutions for religious education which are affiliated with the large universities and colleges.

The enrolments at the institutions surveyed, taken as a whole, have shown a continued growth during the last fifteen years. Such a growth has been the common experience of colleges and universities during this period. Much of the growth has doubtless been brought about through the greatly increased enrolments in the high schools of the country. During the last two years there have, however, been many decreases in enrolments at denominational colleges.

In eleven institutions for which data are available, approximately 61 per cent of the entire student body are affiliated with the supporting communion. Analyses of the occupations of alumni show that those engaged in education and those engaged in religious service far outnumber those in any other occupation. During the last quarter of a century the number engaged in educational work has tended to increase much faster than the number in any other occupational group. At the present time approximately 50 per cent of the graduates of the colleges surveyed are entering this profession.

Data regarding the residence of students show that approximately half of the student body live within a radius of 50 miles of the institution which they are attending. This is the common situation in all institutions of higher learning. On the average about one-half of the alumni reside in the state in which their alma mater is located.

The future of a college depends to some extent upon the wisdom with which it has been located. Certain principles have been developed by which judgments may be formed as to the relative merits of different locations for a given institution. The matter of location must be considered from two points of view: (1) service to the state program of higher education; (2) service to the supporting communion.

CHAPTER III

CONTROL, ORGANIZATION, AND INTERNAL ADMINISTRATION

Boards of Control as Now Constituted

Table 12 shows the official titles of the boards of control, the number of members on these boards, the number of standing committees listed in the catalogs, and the number of members of the executive committees of the boards of control of fifteen colleges and universities.

There appears to be a tendency among the colleges and universities represented in Table 12 to have relatively large boards of control. Eleven of the fifteen institutions represented in the table have 20 or more members on their official boards while only four of the institutions have fewer than 20 members on their official boards.

The boards of control of all of the institutions shown in Table 12, except Carr-Burdette College, have executive committees, and all but Carr-Burdette College, Christian College, Bethany College, and Transylvania College have listed in their catalogs a number of standing committees in addition to an executive committee. The boards of control of seven of the fifteen institutions have five or more standing committees, while the boards of control of two of these institutions have more than ten standing committees.

1. *Size of the Board*

Many of the administrators of these colleges believe that relatively large boards of control are preferable to small boards for institutions depending for funds largely upon gifts from churches or from individuals. It appears that an official connection with an institution as a member of its board of control often creates interest in the program of the institution upon the part of prominent men who otherwise might not be

TABLE 12. OFFICIAL TITLES OF BOARDS OF CONTROL, NUMBER OF MEMBERS ON BOARDS, NUMBER OF STANDING COMMITTEES LISTED IN CATALOGS, AND NUMBER OF MEMBERS ON EXECUTIVE COMMITTEES OF BOARDS OF CONTROL OF FIFTEEN INSTITUTIONS

	OFFICIAL TITLE	BOARD OF CONTROL		
		NUMBER OF MEM- BERS	NUMBER OF STANDING COMMITTEES	NUMBER OF MEMBERS OF EXECUTIVE COMMITTEES
Bethany College	Board of Trustees	30	1	8
California Christian College	Board of Trustees	22	5	9
Carr-Burdette College	Board of Trustees	11	0	0
Christian College	Board of Trustees	26	1	6
Cotner College	Board of Trustees	23	5	5
Culver-Stockton College	Board of Trustees	19	8	7
Drake University	Board of Trustees	45	13	11
Eureka College	Board of Trustees	24	7	8
Hiram College	Board of Trustees	26	11	7
Lynchburg College	Board of Trustees	30	9	6
Missouri Christian College	Board of Incorporation	25	1	5
Phillips University	Board of Trustees	17	2	6
Spokane University	Board of Regents	15	4	6
Transylvania College	Board of Curators	50	1	7
William Woods College	Board of Directors	20	2	7

interested. Often those selected as members of the board of control of an institution are large givers to this institution.

Although a college or university may derive the advantages mentioned above by having a relatively large membership on its board of control the institution is placed at a disadvantage with respect to the operation of its board. The governing board of regents, trustees, curators, directors, or incorporators, as the case may be, should be large enough to insure a breadth of point of view, and yet small enough to permit

friendly cooperation and exchange of opinion. Experience indicates that a board of seven or nine members meets these requirements. A smaller number may encourage the domination of the board by one strong individual, or may permit views of one or two highly individualistic members to count too heavily in any final vote. A larger board becomes unwieldy, leads to factionalization, or to the necessary delegation of general powers to executive committees for the management of interim affairs. A small board of seven or nine members makes contact with all of the members comparatively easy, and engenders a general knowledge and discussion of all of the problems of the institution with all of the members of the board. As a result the individual members of the board acquire a breadth of view in approaching specific problems upon which decisions are to be made.

2. Executive Committee

As Table 12 shows, it is the common practice of college and university boards of control to have executive committees. The executive committee in most instances has all or practically all of the powers of the board during the interim when the board is not in session. The most common practice is for the board to meet only one time each year. The executive committee, however, meets frequently. It is small enough and meets often enough to be well informed concerning the affairs of the institution. This is not true of the board as a whole. As a result, the boards of some of the institutions have taken action at times which is not in accord with the best judgments of their executive committees. Two recommendations are made for obviating this situation: first, the small board of seven members, as suggested in the preceding section; second, the provision that the number of members on the executive committee shall be a majority of the entire board of trustees.

3. Qualifications of Board Members

A rather definite type of man is required for a trustee of a college or university representing a religious communion. He

should be interested in those things for which institutions supported by religious bodies stand, although he need not necessarily be a member of the particular communion represented by the institution of which he is a trustee. At none of the institutions surveyed is membership in the communion a requirement for trustees. In most cases, he ought to be a college graduate, though a board may benefit greatly by the presence of a public spirited man without college training if such a man has a genuine interest in higher education and has had experience with business and public affairs adequate to guarantee breadth of outlook and soundness of judgment in passing upon the opinions and proposals of his executives.

4. *Functions of Boards of Control*

As a means of studying the administrative machinery of the colleges and universities the writers found it advisable to examine the minutes of the meetings of boards of control, of the executive and finance committees of these boards, and of the faculties and faculty committees, over a period of years. Likewise, official correspondence of the members of the administrative staffs, in so far as this correspondence pertains to institutional policies, was examined with care. In forming a judgment concerning the relationship between the college administrations, on the one hand, and the boards of trustees and their committees upon the other, the writers have relied almost entirely upon official records and reports of the types mentioned above. The judgments formed may be subject to some error in that the official records examined are in many instances far from complete. However, it is thought that the records available are sufficient in their scope to make clear the general relationships between the legislative and the executive departments of the college and university organizations.

In the case of a majority of the institutions, it appears that the boards of control are, in general, performing those functions which belong to the legislative bodies, and that the administrations are performing those functions which are administrative in their nature. In the case of a few institutions,

however, considerable confusion appears to exist in the minds of the members of the boards of control concerning the differentiation of the functions of the official board and those of the college administration. After all, it is not an easy matter to determine the point where the functions of the board of control end and the responsibilities of the president begin. The duties of a board of trustees of a college are in a general way similar to those of a board of education of a city school system, while those of a president of a college are similar to those of a superintendent of city schools. On page 14 of the *Report of the Educational Commission of Chicago*, the distinction drawn between the legislative and administrative functions of a city school system are outlined in the following statement:

"The duties of the board of education as fixed by law involve the establishment and maintenance of a public school system. This implies that the board, acting for the people, shall prescribe the general educational policy of the city, determining, on the one hand, the kind and number of buildings to be erected for school purposes, and on the other what shall be taught in the schools, and spending economically and fairly the school funds for these purposes. The administration in detail of the schools, either on the educational or on the business side, cannot be carried on by the board acting as a whole, and should not be carried on by a system of committee management."

This statement reflects the judgment of educational authorities generally.¹

Most of the cases of over-activity upon the part of the members of boards of trustees of colleges arise from a confusion as to what duties these members were elected or appointed to perform. The primary function of boards of trustees is to determine policies, select executives, approve new undertak-

¹Cubberley, E. P. *Public School Administration*, pp. 118-121, published 1922, Houghton Mifflin Company.

Deffenbaugh, W. S. *The Administration of Schools in Smaller Cities*, pp. 8, 27-29, U. S. Bureau of Education, Bulletin No. 12, 1922.

Olsen, H. C. *The Work of Boards of Education*, pp. 1-9, published 1926, Bureau of Publications, Teachers College, Columbia University.

Committee on the Relations Between Boards of Education and Superintendents, report of, in *Proceedings of the National Education Association for 1917*, pp. 739-756.

Theisen, W. W. *The City Superintendent and the Board of Education*, Teachers College, Columbia University, Contributions to Education No. 84, pp. 30-31.

Roudebush, R. R., and Russell, J. D. *The School Board and Superintendent*, in *American School Board Journal*, Vol. 74, No. 6, and Vol. 75, No. 1, for June and July, 1927. Also published as Bulletin 88, Indiana State Department of Public Instruction, Indianapolis, Indiana.

ings, and determine expenditures. Just as soon as the members of such a board transform it into a board of supervision for the detailed oversight of the work of the institution, trouble is certain to arise. Experts competent to deal with such problems should be employed as officers of administration and their opinions should be sought and followed. In case a board doubts the wisdom of an opinion of its president, it should postpone the matter at issue for further consideration, and in the meantime secure an additional opinion from some outside disinterested expert, or else it should employ a new expert whose judgment it is willing to follow.

The work of a board of trustees deals with the larger problems of control. These problems are almost certain to be mishandled if the board undertakes to supervise the details of the college administration. In other words, boards of trustees and their executive committees should act as legislative and not as executive bodies. A clear distinction should be drawn between legislative and executive functions. In all matters which are strictly professional and which relate to the details of administration, the board should refuse to act in any way until the matter has first been brought to the attention of the proper executive officer; the decision of this officer should not be reversed unless the board is thoroughly convinced that he is wrong. In the colleges surveyed, the cases are few where serious misunderstandings had arisen between the administrations and the boards of control. However, in instances where trouble of this kind has arisen, almost without exception it has been when boards of control or board committees, anxious to manage as well as to govern, have assumed executive functions and begun to displace the chosen executive officers.

The board of control of an institution is charged with the complete responsibility for the organization and conduct of the institution. The constituency very properly holds the board responsible if anything goes seriously wrong with students, faculty, teaching, finances, or general welfare of the institution. In its last analysis the final responsibility for everything rests on the board of control, and therefore the

final authority also must always reside in that body. There has come to be, however, a more or less natural division of responsibilities between the board of trustees and the administration, since the trustees of necessity must depend almost wholly on the wisdom of their chosen executive officers in certain matters.

The first and most important function of the board of control is to select its president and executive officer.

A second general function of the board of control is the determination of the general policies of the institution; this is in no sense a function of the administrative or teaching staff. The general policy of appointments, promotions, and budget making should be formulated by the board of control after discussion with the president and faculty representatives. The board should have control of investments of funds belonging to the institution, and should have the final determination of the annual budget. Final authority should rest in the board with respect to building construction and the operation of the plant.

The initiative in educational matters should be left to the president and faculty, although the board should have a final approval or veto on all educational policies. In such matters as entrance or graduation requirements, selection or dismissal of students, selection, promotion or demotion of faculty, salary advancement or assignment of classes, the board should have no authority to act except upon recommendations from those primarily responsible for the academic success of the institution. The voting of degrees upon the recommendation of the faculty is a duty of the board which falls also into this class of functions consisting principally of actions to be taken upon the recommendation of the executives and faculty of the institution. It must be borne in mind, however, that the board may either approve or disapprove a recommendation, and should in no sense become a rubber stamp for the approval of all recommendations brought before it. The board is finally responsible for judging the results of the work of the entire institution.

Bodies such as boards should legislate and not execute. Executive work cannot be handled satisfactorily by either boards or their committees. Such work should be left to individuals. A major criticism of the present organization of the boards of control of the colleges surveyed is that these boards have too many committees. In many of the institutions these committees do not function and, consequently, there are no evil results apparent from the extensive committee organization which has developed. However, in a few of the institutions the committees, attempting to perform functions which they assumed they had been appointed to perform, usurped functions which should belong to the president or to other members of the faculty.

In two of the colleges, boards of control through their committees interfered with the discipline of students, a function which clearly does not belong to a board of control. In several cases, students who the president and faculties thought should not be allowed to reenter the institutions after being suspended, were readmitted over the protests of the faculties of these two colleges.

At one institution the board of trustees attempted to dictate to the president concerning specific modifications which should be made in the organization of the institution in order that it might obtain membership in a regional standardizing association. It is a function of a board of trustees to decide as to the advisability of a college attempting to become a standard institution. It is not a function of a board to pass judgment with respect to the specific modifications which may be required in the program of studies offered, the faculty, or the equipment of the college, in order that the institution may meet the standards of a regional accrediting association. The president, as an expert in the field of college administration, with his corps of advisers, should decide as to the modifications necessary to meet the requirements of standardizing agencies. In the light of information presented by the president of a college, and after a careful consideration of his recommenda-

tions, the board should decide with respect to the advisability of attempting to meet requirements for accreditation.

Providing funds is one of the chief functions of a board of control. There are few duties of boards of control more important than that of keeping the needs of their institutions constantly and forcefully before the public. The individuals who compose the constituency are absorbed with private interests or with other public matters, and if boards of control do not emphasize the needs of their institutions, these needs may easily be overlooked and as a result, potential gifts may go for other purposes or may not be given at all.

The Internal Organization of the Colleges and Universities

Among the four junior colleges studied with respect to internal organization, considerable variation exists in the number and names of administrative offices as listed in their respective catalogs. The president is the only office found in all four institutions. Three of the four junior colleges have deans of the faculty, field representatives, and matrons, while two of the four junior colleges have deans of women, secretaries, secretaries to the presidents, hostesses, college physicians, nurses, and engineers. The offices maintained in only one of the four institutions are assistant dean, college pastor, registrar, office secretary, postmistress, supervisor of dining room, chaperone, supervisor of practice-hall, domestic manager, night attendant, chief of watch, director of the conservatory of music, editor of the college magazine, supervisor of extension activities, dietitian, president of board of managers, secretary of the board of managers, and treasurer of the board of managers. The number of different administrative offices at the four junior colleges is as follows: William Woods College 21; Christian College 21; Carr-Burdette College 4; Missouri Christian College 3.

Table 13 shows the offices of administration listed in the catalogs of the ten colleges and universities offering a four-year program of undergraduate work. It will be observed that many of the titles listed in the college catalogs as offices of ad-

TABLE 13. OFFICES OF ADMINISTRATION LISTED IN THE CATALOGS OF TEN COLLEGES AND UNIVERSITIES

OFFICE	BETHANY COLLEGE	CALIF. CHRISTIAN COLLEGE	CULVER-STOCKTON COLLEGE	COTNER COLLEGE	EUREKA COLLEGE	HIRAM COLLEGE	LYNCHBURG COLLEGE	PHILLIPS UNIVERSITY	SPOKANE UNIVERSITY	TRANSYLVANIA COLLEGE ¹
President	X	X	X	X	X	X	X	X	X	X
Dean of School or College	X	X	X	X		X	X	X	X	
Dean of College and Registrar			X				X	X	X	
Dean of Faculty and Registrar					X					
Chairman of Faculty										X
Registrar	X	X		X			X	X		
Registrar and Secretary to the President						X				
Registrar and Secretary to the Faculty										X
Secretary to the Faculty					X					
Assistant Dean of the College								X		
Dean of Men		X		X					X	
Dean of Women	X	X		X	X	X	X	X	X	X
Dean of Women and Matron			X							
Assistant Dean of Women						X				
Superintendent of Commons and Matron of Dormitory									X	
Treasurer	X	X								X
Treasurer and Business Manager			X							
Secretary-Treasurer				X	X	X	X			
Assistant to the Treasurer										X
Bursar	X									
Bursar and Secretary to the Faculty			X							
Secretary									X	
Financial Secretary		X	X							
Superintendent of Promotion			X							
Field Secretary					X					
Field Representative			X						X	
Secretary to the President		X		X	X		X		X	X
Office Secretary		X	X							
Office Manager		X								
General Secretary						X				
Secretary to the Board of Trustees								X		
Stenographer						X				
Librarian	X	X	X	X	X	X	X	X	X	X
Assistant Librarian					X					X
Superintendent of Buildings and Grounds				X		X				

¹Including the College of the Bible.

TABLE 13—CONTINUED

OFFICE	BETHANY COLLEGE	CALIF. CHRISTIAN COLLEGE	CULVER-STOCKTON COLLEGE	COTNER COLLEGE	EUREKA COLLEGE	HIRAM COLLEGE	LYNCHBURG COLLEGE	PHILLIPS UNIVERSITY	SPOKANE UNIVERSITY	TRANSYLVANIA COLLEGE ¹
Engineer, and Superintendent of Buildings and Grounds			X							
Custodian of Buildings and Grounds									X	
Health Director									X	
Medical Examiner		X								
College Nurse		X								
Director of Physical Education									X	
Director of Athletics			X							
Director of Dramatics and Forensics			X							
Editor of Publications			X							
Director of Orchestra and Band			X							
Total Number of Administrative Offices	7	13	15	9	9	10	7	7	12	9

¹Including The College of the Bible.

ministration are not properly classed as administrative offices, considerable confusion being evident on this matter in the catalogs of both the junior colleges and the four-year colleges.

The President

The president of a college or university is the general manager of the institution; he should also be the academic and intellectual leader. His relations to the board of control should be similar to the relations of a president of a business corporation to the board of directors. He must be given wide discretion in order that he may exercise leadership as emergencies arise in the execution of policies determined by the faculty or board of control.

At some of the institutions surveyed the president is a voting member of the board of control. At other institutions, he

has a seat at board meetings and at committee meetings and has a voice in all of the counsels without having a vote. The latter plan appears preferable as a method of procedure.

As the chief executive of the institution, all other administrative officers should be under the direction of the president and responsible to him, and through him to the board of control. Some authorities¹ would make an exception of the chief fiscal officer, making this officer directly responsible to the board of control. In the latter case the theory held is that the president is an expert in academic affairs but not in business matters, and that the board of control, being interested more directly in the business operations of the institution than in the academic problems, should have direct relations with the fiscal officer of the institution. Some of the colleges surveyed employ the unit method of control with the fiscal officer responsible to the president, while others employ the dual method of control with both the president and the chief fiscal officer responsible directly to the board of control.

Observation of both systems as they operate in the colleges surveyed leads the writers to believe that the unit method of control generally tends to be more satisfactory than the dual method. Exceptions might be made in the case of a very few institutions where the presidents are good academic administrators but do not appear to have marked ability with respect to business affairs. In most instances where the chief fiscal officer is responsible directly to the board of control, the writers have observed that the machinery of the administrative organization does not run as smoothly as it does in those institutions where the chief fiscal officer is responsible through the president to the board. In sound administration there should be no dualism of responsibility.

It should be remembered, of course, that the unit method of control does not forbid the extensive delegation of authority

¹R. M. Hughes "The Functions of Boards of Trustees"; and Henry Suzzallo "What is Best for Educational and Administrative Efficiency" in *Transactions and Proceedings of the National Association of State Universities*, Vol. 22, 1924.

by the chief administrative officer. It is to be assumed that, in making the president responsible for both the academic and the business affairs of the institution, he will delegate almost all of the executive functions connected with the business administration to the chief business officer, holding him responsible for results, and giving attention only to major matters of the financial policy. The issue of dual versus unit control involves only the question of whether the business manager's relationship to the board is direct, or exercised through the office of the president.

In general, if the president of a university or college is not competent to form a judgment with respect to important business activities, he is very likely to be defective in other duties as well. It is the opinion of the writers that a board of control should endeavor, when seeking a new president, to obtain the services of a man competent to direct both the academic and the financial affairs of the institution.

Authorities agree that special administrative officers and teachers acting as officers of administration should be under the direction of the president, since they are engaged in executing established policies. The same is true of committees or boards with executive or administrative functions.

The Business Office

The increasing size of educational institutions, the growing complexity of the organization, and the pressure of problems of college operation, have contributed to the recognition of a distinct type of administrative activity. In most institutions this has resulted in the establishment of the business office separate and distinct from the other offices of administration. The business office ought to function under the general supervision of the board of control and its chief executive officer, the president of the institution. For the best interest of all concerned it is essential that there be a whole hearted cooperation between college faculties and business officers. The functions of each need to be carefully defined.

It is the function of the business administration¹ to shape administrative policies which are adequate for the guidance of the college or university in proper utilization of its physical and financial resources. The business officer must apply sound business principles to the management of the affairs of the institution in order that the institution may serve successfully those purposes for which it was organized. It is necessary that the business administration operate within the limits which are established, not only by the form of the organization of the institution, but also by the ends which the institution hopes to achieve. Although institutions of higher learning ought to be conducted in a business-like way, the business administration officers must never forget to recognize the fact that their business policies cannot always be tested adequately by the application of business standards alone. The writers have observed that this point has sometimes been forgotten by the business officers of some of the institutions investigated.

It is generally conceded that the business administration of an institution of higher learning should know facts concerning items such as the extent to which plant space is utilized. However, it is clearly not the task of the business officer to make the final decision with respect to the extent to which plant space may be utilized without interfering with the educational efficiency of the institution. Unit cost studies ought to be made, either in the business office or with the close cooperation of this office. However, it is not the task of the business administration to attempt to determine the relative efficiency of the institution, or of any department or departments within the institution by calculation of unit costs.

Securing economy wherever possible without decreasing educational efficiency is a major task of the business administration. It is not the task of the business administration, however, to establish policies or make changes which seriously affect educational policies. Under no condition is the business administration justified in making decisions which affect the

¹This subject was discussed by J. P. Adams before the fifth annual meeting of the Association of University and College Business Officers of the Eastern States. The material of this paragraph is to some extent in the phraseology of Professor Adams.

educational policies of the institution. The business office is expected to provide all of the facilities required by the academic department within the limits which are set by the resources of the institution and demanded by the necessity of maintaining an educational program throughout future years.

The functions of college and university business officers may be classified under two major heads: (1) the care of funds and other permanent accounts; (2) the operation of the current budget.

The first of these tasks requires a high type of financial resourcefulness. Permanent funds must be invested in such a manner as to produce a regular income; they must also be invested in a manner that will produce as large an income as possible with safety to the principal. They must be maintained without loss. In many American colleges and universities, including a number of the institutions surveyed, funds have not been maintained through the years without the occurrence of serious losses. Sometimes they have been invested in unsafe securities with resulting losses, and at other times they have been deliberately hypothecated. Permanent funds must be invested to produce income, with the security of investment always a ruling consideration. They should always be used for investment and never for speculation. They must be administered in strict accord with all legal requirements as well as with the special conditions under which they have been created, even though these conditions may in some instances prove unfortunate. Often they require special investment in assets specifically named. Whenever conditions of this type have been agreed to in accepting the funds, they should be met without exception. If the care of permanent funds is placed in the hands of the business administration, as the writers think it should be, it is clear that a high type of ability is required in the responsible official.

The proper care of the plant and equipment also rests upon the business administration. Sometimes the direct care of the properties is delegated to a superintendent of buildings and grounds; however, in the majority of the institutions sur-

veyed the chief business officer serves also in the capacity of superintendent of buildings and grounds. In the proper performance of his functions he must make certain that the plant and equipment are economically operated, properly protected, and adequately maintained.

While the care of permanent assets demands a high type of financial resourcefulness, the operation of the current budget demands equally as great managerial ability. Within the limits set by educational efficiency and the academic policy of the institutions, the problems here are substantially the same as those which must be met by the business manager of any commercial enterprise. It is necessary that capital and current income be carefully distinguished and kept in separate funds. In a few of the institutions represented in this report such a separation of funds has not been maintained. Income must be determined as accurately as possible and should be applied to the special end for which it is intended. Operating cost must be determined with as great a degree of accuracy as possible. Whenever it is possible to do so without decreasing educational efficiency, operation costs must be reduced. Equipment must be effectively utilized. Disbursements must be properly accounted for. The business office is responsible for the management of all phases of the current operations, but these operations must always be held strictly within the budget established by the controlling authorities of the institution.

The Promotion Office

Most colleges which depend largely upon gifts for support are compelled to maintain an extensive program of publicity and financial promotion. Other non-tax supported institutions having small endowments and receiving little support in the form of gifts for current maintenance must depend largely upon student fees for support. Often this results in comparatively high tuition charges, which, in turn, result in the necessity of an extensive program of student promotion. A number of the institutions surveyed carry on extensive programs of student promotion or of financial promotion.

A variety of types of organization of promotion offices are found among the colleges surveyed. At some institutions a single promotion office is established for both student and financial promotion, while at other institutions separate offices are maintained for the two types of promotional activity. Some institutions place the program for financial promotion under the direction of the business office and the program for student promotion under the direction of the president, the dean, or the registrar. A few institutions allocate to the office of alumni secretary the functions of student promotion.

It is difficult to set up hard and fast principles concerning the best form of organization to care for promotional activities. However, a separate office for financial promotion appears to be desirable at institutions where considerable attention must be given to obtaining financial support. At such institutions it is recommended that the department of financial promotion be made coordinate with the academic and business departments and responsible through the president to the board of control of the institution.

Academic Administration

The academic administration of colleges and universities centers largely in the offices of deans and registrars. There appears to be little uniformity among the institutions included in this report as to the respective functions which these officers should perform. Both offices exist at all of the institutions surveyed; however, at the time that the data for this report were gathered both offices were held by a single individual in approximately one-half of the institutions. However, since these data were gathered, a number of the institutions having a single individual performing the work of both offices have made administrative reorganizations and allocated the functions of registrar and dean to two individuals.

Both the office of the dean and the office of the registrar appear to be still in the stage of evolution in a majority of colleges and universities. In the early history of many of these institutions the only office of administration was the

office of president. As the instructional organization became more complex certain of the functions originally performed by the president were allocated to other members of the faculty. Often a secretary of the faculty was appointed. This man performed the functions now performed by both deans and registrars. In some of the institutions the secretary of the faculty later developed into the office of college dean.

With the growth of institutions and the increasing complexity of the organization a tendency appeared for the dean to delegate to a clerk many of the detailed duties of his office. Often this clerk also assisted the president in writing letters and keeping records, and in checking up on the accounts of the institution. In several of the institutions the clerk who served as assistant to the dean received the additional appointment of secretary to the faculty. In some instances he served as secretary to the board of trustees and of the executive committee of the board, as well as secretary to the faculty. This clerkship, or assistant deanship, as it was called in some institutions, developed eventually into the position of registrar.

Although all of the colleges surveyed now have officers bearing the title of registrar, in a considerable number of these institutions the registrar is still little more than a clerk. This is true particularly in those institutions where the office is relatively new. In other institutions the registrar is no longer looked upon as a clerk. He holds professorial rank and is classed as a major administrative officer. He is one of a group of men and women whose business it is to see that the work of the college runs smoothly.

Due to the fact that the office of registrar developed from the office of assistant to the dean, considerable lack of uniformity is found among the institutions with respect to the specific functions allocated to these two offices. The writers are not prepared to suggest any hard and fast rules with respect to the allocation of the functions of academic administration that will be applicable to all institutions of whatever size. The size of an institution must be given consideration in dealing with the allocation of administrative functions.

Also the type of college, its control, location, traditions, and needs, as well as its peculiarities of personnel, must all be taken into consideration.

The term "dean" as well as the term "registrar" is used in two distinct senses. In the smaller college the dean is the administrator of the entire institution, and the registrar is usually a subordinate officer to the dean. In the institutions having university organizations each dean is responsible for the administration of his own college, while the registrar serves as an administrative officer for the entire institution. The tendency in the smaller colleges is for the position of registrar to be equivalent in rank to a professorship. In the institutions having university organization, the office of registrar must of necessity be of greater importance relatively than it is in an independent college. The tendency in the universities appears to be for the office of registrar to be coordinate with that of deans and business officers.

The advisability of attempting to define precisely all the respective duties of administrative officers of an institution of higher learning is open to question. However, many college administrators are of the opinion that there should be a substantial understanding as to the respective duties of deans, registrars, and other administrative officers, in order that a harmonious relationship and a whole hearted spirit of cooperation may be made possible. Consequently, in a few institutions the duties of the officers of administration have been defined in writing. In other institutions, however, the officers expressed the opinion that a definition of functions would hinder rather than help in administration. They felt that definitions which would be satisfactory at the present time might prove to be very unsatisfactory at some future date.

The writers are of the opinion that the complex machinery of college and university organization makes it wholly desirable to have worked out in each institution a plan for the allocation of functions to the respective officers of administration. A plan suitable for one institution may not be satisfactory for another. The character of the institution and, in the

case of universities, the relative place of the college within the larger organization of the institution are large factors to be considered in the determination of the respective functions of the several officers of administration. No one plan will fit all institutions without modification; consequently, any general plan to be satisfactory must be large enough and flexible enough to care for peculiarities of personnel as well as for future contingencies.

The development of the office of the registrar has been one of the most important changes which has taken place in the administration of higher education in recent years. Because this office is relatively new in college and university organizations its functions have not become thoroughly standardized. As a result of this lack of standardization new types of work are continually being delegated to it. When the office was first established the most important duty of the registrar was that of making and caring for student records. However, in most institutions of higher education today the registrar performs important administrative functions.

A number of functions of deans and registrars are listed below. It is not expected that all of the functions listed for deans will be performed by all deans, or that all of the functions listed for registrars will be performed by all registrars. Furthermore, no attempt has been made to include in these lists all of the functions which might be performed to advantage by deans and registrars. The functions listed are those which are now being performed by deans and registrars in a number of those colleges and universities which appear to have the most satisfactory administrative organization from the point of view of effectiveness.

Functions of a College Dean

1. The direction of the educational activities of the college.
2. Service as chief adviser to the president in matters pertaining to the policies of the college.
3. The formulation of policies and the presentation of them to the faculty or to the president for consideration.

4. Directing the attention of the faculty to changing educational thought and practice, with particular reference to present trends in higher education.
5. The transmission to the president of the budget recommendations of the college; the details of the budget are to be worked out in conference between the dean and the heads of departments.
6. Making reports relating to the work of the college.
7. The supervision of curricula, courses, and methods of instruction.
8. The supervision of the progress and the academic welfare of students.
9. The classification and assignment of students to classes.
10. The keeping in touch with the disciplinary problems of the college.
11. Service as a member of the administrative council.
12. Representing the college at meetings of educational associations.
13. In cooperation with the departments concerned, nominating members of the teaching staff.

Functions of the Registrar

1. Service as college or university examiner.
2. Maintenance of academic records of all kinds.
3. The organizing of materials for statistical use.
4. The handling of personnel accounting.
5. The direction of the registration of students.
6. Service as secretary for the faculty and for important faculty committees.
7. Supervision of time and room schedules.
8. Preparation of educational publicity.
9. Editorial work in connection with the college and university catalog and bulletins.
10. Checking the credentials of candidates for graduation.
11. The direction of a bureau of information.
12. The preparation of reports of various kinds relating to personnel problems of students and faculty.

The Faculty

1. Faculty Committees

Table 14 shows the number of standing committees of the faculty listed in the catalogs of several colleges and universities. The catalogs of four of the institutions surveyed do not list any standing committees.

TABLE 14. NUMBER OF STANDING COMMITTEES OF THE FACULTY

NUMBER OF FACULTY COMMITTEES LISTED IN CATALOG		NUMBER OF FACULTY COMMITTEES LISTED IN CATALOG	
INSTITUTION		INSTITUTION	
Atlantic Christian College	0	Eureka College	13
Bethany College	11	Hiram College	6
California Christian College	12	Lynchburg College	13
Carr-Burdette College		Missouri Christian	
(Junior College)	0	College	0
Christian College		Phillips University	10
(Junior College)	0	Spokane University	15
Cotner College	14	Transylvania College	14
Culver-Stockton College	16	William Woods College	7
Drake University	4		

The writers are very doubtful as to the worth of faculty committees for administrative purposes. Most of the committees represented in Table 14 are administrative in their nature. The work attempted by these committees would be better performed if given to responsible individuals. Individuals are more likely to specialize their knowledge and less likely to vacillate in their decisions. When administrative functions are performed by individuals, the responsibility for decisions is more easily placed and the source of decisions is more quickly located by everyone concerned. Lastly, the valuable time of many faculty members is conserved.

It is obvious that a college or university faculty should have control of policies involving discipline. However, it should not attempt to control such matters in detail, since it is not in a position to execute or administer. The policies which it formulates should be of the most general sort. It should delegate its work, granting considerable discriminatory powers, and reserving to itself the right of final approval or rejection of the decisions taken by subordinate persons.

The criticisms of faculty committees for administrative purposes do not apply to committees that are appointed for the purposes of formulating policies. There is usually a considerable amount of such work which can profitably be delegated to committees of the faculty. Few standing committees are necessary for this purpose, since relatively stable decisions are to be expected on most of the questions of policy that arise. This type of work therefore generally becomes a matter for a temporary committee.

Faculty committees of this sort are customarily appointed by the president. Some consideration must be given to the suitability of committee members for the type of investigation assigned them. Care must also be taken not to overload any one member of the faculty with committee assignments.

2. Departmental Organization

In all of the institutions surveyed, the faculty as a whole was organized into departments on the basis of subject-matter offerings. The following list of duties of departments has been prepared in the light of the situations existing at the various institutions surveyed.

The first duty of a department is the recommendation of the courses to be offered by the department, subject to approval by the dean or president. The nomenclature of the course, its content, prerequisites, and the amount of credit it carries should be determined by the department. The dean or president should check the proposed course with respect to: (1) the assignment of the content of the course to the field of the particular department; (2) the over-lapping of the content of the course with other courses in the same department or other departments; (3) the amount of credit to be given for the course; (4) the probable demand for the course; (5) the possibility of offering the course in view of the budget limitations of the department and the institution as a whole; (6) the contribution of the course to the general aims of the institution. After meeting this sort of a check, the course should be approved as recommended by the department.

A second duty of a department is to recommend the time schedule of the courses to be offered during any given semester or term. Recommendation should be made regarding the particular courses to be offered each term or semester, the hours at which such courses should preferably be given, the number of sections of each course which should be provided, and the frequency with which a given course is offered during the academic year. These recommendations should be subject to check by the registrar with respect to: (1) the availability of recitation rooms; (2) conflicts with other courses in the same or other departments; (3) proper distribution of courses throughout the entire student day. The time schedule proposed by the department should also be checked by the dean or president in the light of available budget resources with which to pay for the proposed offering and also with regard to the loads which are assigned the various faculty members. When adjustments mutually satisfactory to the department, the registrar and the dean or president are agreed upon, the recommended schedule then should become the official schedule of classes for the department during the term or semester concerned.

A third duty of the department is to make recommendation, subject to approval by the dean or president, regarding the work offered and required for a departmental major or field of concentration. Recommendations to be followed by students majoring in the department should be made along the lines of the sequence of courses, the courses to be required of all students majoring in the department, and the minors to be associated with the major field. In institutions where the major and minor plan is being superseded by the plan of a field of concentration, the department should be responsible for advising students concerning the grouping of courses in the respective field of concentration.

A fourth duty of the department is to make recommendation to the president of persons to be employed as instructors in the department. In some of the colleges surveyed, only the appointees for subordinate positions, such as fellowships and

instructorships are customarily nominated to the president by the heads or chairmen of the departments concerned, and then by the president these nominations are made to the board of control. In a few institutions all new men below the rank of full professor are nominated by the departments.

So long as the president retains his present responsibility for the success of the college program it does not seem possible for him to surrender his right of initiative in the selection of heads of departments. In a number of the colleges of this group, satisfaction and confidence on the part of the faculty has resulted from the policy of giving to the faculties the definite privilege of initiative and suggestion in the selection of all staff members who are not departmental heads. It appears that those institutions which have done the most to encourage initiative along these lines have obtained a finer spirit in their several departments or colleges.

A fifth duty of departments is to make recommendations to the president regarding salary changes for all instructors in the department below the rank of department head. The president will consider these as recommendations only, and final action must be taken by the board of trustees on recommendation of the president. The president must consider the recommendations for salary changes coming to him from departments in the light of the resources of the institution, and his own general evaluation of the comparative needs of the various departments. The initiative for salary changes for department heads lies with the president or dean, not with the department.

It will be understood that many, in fact most, of the duties herein set forth for departments will actually be performed by the head of the department. In a department having more than one instructor, a democratic type of administration demands that the department head consult and advise freely with the junior members of the department on all of the matters concerning which recommendations are to be made by the department.

3. *Administrative Functions of the Faculty as a Whole*

While much of the internal administration delegated to the faculty is performed by departments, there are certain large functions which belong to the faculty of the institution as a whole.

The major duties of the faculty as a whole are: (1) to determine the departmental organization of the college; (2) to fix requirements for entrance to and graduation from the college; (3) to fix requirements for the various degrees offered; (4) to nominate candidates for degrees; (5) to provide for the discipline and welfare of students; (6) to determine the marking system used in the evaluation of scholarship achievement by students; (7) to develop scholars and scholarship.

Besides these strictly academic duties, the tendency in modern practice is to give the faculty as a group a certain degree of responsibility for the general administrative welfare of the institution. Certainly, whenever the administration of an institution goes wrong, the individual and collective interests of faculty members are vitally affected. Some means of protection of these interests seems desirable and necessary.

James P. Munroe, in Cattell's "University Control"¹ recommends a joint committee of faculty and trustees as a desirable means of direct communication between the faculty and trustees. The Committee of the American Association of University Professors on "Place and Function of Faculties in University Government" in 1920 also recommended such a committee by a majority report. Such a committee should be elected by the faculty itself, not appointed by the president as are other faculty committees. The committee should be directly responsible to the faculty group, should be elected newly each year, and should be subject to immediate recall upon majority vote of the faculty.

At some of the colleges surveyed there appears to be little reason for the establishment of such a committee. However, at other colleges, a committee of this type might improve

¹Cattell, J. McKeen, *University Control*, published by Science Press, New York, 1913.

things greatly. From time to time a faculty committee of equal size with the executive committee of the board of control, might well meet with the executive committee of the board. Such a faculty committee should have authority to suggest such matters of educational policy and such plans of improving the administration as cannot well be transmitted through the president. They could also render assistance to the board in its task of selecting a man for the presidency whenever the position becomes vacant.

In a number of the colleges considerable dissatisfaction was expressed by staff members over the appointments made in cases where new men were brought to the campus. At some of the institutions staff members felt that scholarship standards were being lowered. The faculties did not have confidence in the judgment of the presidents on matters relating to academic affairs. In two cases it was felt that membership in the supporting communion had been given much greater weight in the selection of the members of the teaching staff than scholarship and teaching ability. Problems such as these could well be discussed in a joint committee of board and faculty members.

In a considerable majority of the institutions studied the writers found a spirit of harmony existing between the administration and the other members of the faculty. At two or three of the institutions, however, a serious lack of harmony and a marked antagonism prevailed between a considerable majority of the staff members and the administration. Such a situation ought not to be permitted to continue. It would appear desirable for the board of control to inquire particularly through the faculty committee from time to time as to the acceptability of the president. Certainly no president should be retained in office beyond the period of his greatest effectiveness.

It is very essential to the success of an educational institution that harmony and confidence exist between the officers of administration and the members of the teaching staff. A serious lack of harmony and a marked antagonism to the administration upon the part of only a few disgruntled faculty

members should be a valid reason for the removal of the offending faculty members. On the other hand, the faculty, through a committee of the type suggested above, should be free to suggest to the board of control a change in the presidency.

It may seem at first thought that the two statements above are mutually contradictory, and that the idea of a faculty committee suggesting to a board the removal of a president is contrary to sound principles of administration. Logically, however, there is no contradiction, since the suggestion of the removal of the faculty members applies only to the situation wherein there is dissatisfaction with the administration on the part of only a small minority of the faculty, while the suggestion for the removal of the president applies to the situation wherein there is widespread, almost unanimous dissatisfaction with the administration on the part of the faculty.

The seriousness of the situation faced by a board of trustees when there is lack of harmony between the faculty and administration makes it imperative that the board acquaint itself fully with the grievances and viewpoints of both or all sides of the difficulty. Without some such device as a faculty committee, the trustees may obtain a biased view of the situation and may make a decision which is not the wisest possible. In fact, the existence of such a committee will probably anticipate the difficulty in its earlier stages, before it becomes serious, and thus avoid the development of a condition menacing to the welfare of the institution. In the final outcome of a serious difficulty, the board of trustees must decide what is best for the institution, forgetting any element of personality that may be involved, in order to render a decision most conducive to the future welfare of the institution. Personal welfare of either president or faculty members must not be allowed to influence the decision.

The Control of Athletics

One of the problems studied with considerable care was the control of athletics at the various institutions. At a number of the institutions accepting men students the athletic problem

has become difficult to handle at various times during the past ten years. A majority of the institutions surveyed are members of some athletic conference or association which has rules governing the control of athletic activities. Rules regulating eligibility of players and control of athletic activities are much more strict in some conferences and associations than in others. The difficulty which the institutions as a group have faced is that they tend to have much smaller enrolments than the average enrolments of the institutions of the athletic conferences or associations with which they hold membership, or of the institutions with which they compete in athletic games. As a result of this situation considerable influence has been brought to bear from time to time upon prospective athletes to induce them to enroll in the institutions.

Until recently one institution advertised in the catalog that a number of scholarships were available for athletes who earned places upon the athletic teams representing the institution. These scholarships carried with them free tuition. While only one institution, so far as the writers know, has openly advertised scholarships for athletes, no less than six of the institutions investigated make no secret of the fact that athletes almost always receive preference in the awarding of scholarships, other factors being equal.

The most serious difficulty in the control of athletics arises from the attitude of groups of alumni toward athletic activities. Individual members of the alumni group often subsidize athletes to the extent of paying not only their tuitions, but also their board and room rent as well. In a few instances, in the case of the most prominent athletes, funds have also been provided for the purchase of clothes. Cases of the latter type are not common but from time to time they have occurred at more than one of the institutions surveyed.

At the present time at one of the colleges no member of the football team resides in a fraternity house, although a majority of the football players belong to fraternities. Upon inquiry it

developed that a group of alumni had agreed to pay the room rent of athletes on condition that these men lived in the dormitory. This stipulation was made in order that the room rent paid might go to the college instead of to the fraternities. The college was in serious need of funds for the payment of current expenses; also, it had the dormitory space which would have been unoccupied had it not been utilized by the athletes.

At one institution the audit for the year ending June 30, 1925, showed an item of \$20,836.52 representing notes receivable from students. This amount represented debts incurred by students during a period of two or three years. In addition to this amount representing notes receivable, at the time of the survey an item of \$4,631.68 was due the college from the ministerial loan fund and \$3,471.53 from accounts receivable, which represented open accounts maintained with students, no securities of any kind having been given for the latter item. The total indebtedness of students and former students at this institution amounted to \$28,939.73, most of which had accumulated during a period of three years, and very little of which will ever be paid. The most serious phase of the situation with reference to this debt is that considerably more than half of it has been incurred for the board and room of members of athletic teams.

It is the opinion of the writers that no college has a moral right to expend its funds to subsidize students to the extent of providing free room and board. College gifts are not made for this purpose. If a college has comparatively large resources and can afford to provide a high quality of education at a low rate, either the tuition charged should be lower, or else scholarships should be granted. Board and room should not be paid for with money given for other purposes.

Of the \$24,308.05 debt incurred by students and former students of the institution under discussion, which is still unpaid, \$14,039.00 represents debt incurred by scholarship students. Of this amount, students holding athletic scholarships owed \$6,374.44 and students holding ministerial scholarships owed \$7,664.56. A considerable number of the students holding

ministerial scholarships, however, were also athletes and would have received athletic scholarships if they had not taken advantage of the ministerial scholarship arrangement.

Most of the athletes who have left the institutions owing money for board, room, or tuition, are making no effort to repay their debts. One man to whom an athletic scholarship was awarded was a student of one of the colleges for a period of two years. He left the college two years ago at the end of his sophomore year, and does not intend to return. Although as a student he received all tuitions free, yet he now owes the institution over \$600 for board, room, and other expenditures, and states frankly that he never expects to pay this debt. He was an excellent athlete.

A former student and athlete of a second college owes over \$700 to the institution at which he did his work. None of this debt was incurred for tuition, as he received free tuition during the entire time of his attendance at the institution.

Less than 5 per cent of the students at the last institution mentioned received athletic scholarships; yet the group receiving scholarships was responsible for more than 40 per cent of the student debt to the college.

The case cited above may lead the reader to think that the athletic situation at the institutions included in this report is more serious than at other institutions situated in the same localities. The writers do not believe that such is the case. Evidence obtained by means of surveys of a number of other institutions located in the vicinity of these colleges leads to the conclusion that the athletic situation as here reported is more or less typical of that of other colleges and universities in the states in which these institutions are located. A number of the institutions included in this report have taken steps to remedy the athletic situation since the surveys were made. At least three of the four-year colleges which formerly granted athletic scholarships have abandoned this practice. However, there is some evidence to indicate that college athletics in these institutions is tending to become more and more professionalized. Some remedy for the situation must be developed

if the institutions are to remain educational institutions. The writers are convinced that at least half of the colleges would be better off, ultimately, without intercollegiate athletics than they will be if they permit the present practices to continue.

Summary

The governing boards of colleges and universities are, in general, composed of too many members. While there may be some advantages in the large board, from the point of view of interesting a greater number of wealthy individuals in giving gifts to the institution, for the purpose of actual control the large board is unwieldy, tends to promote factionalization, and results in the delegation of most of the important business to standing committees. The functions of boards of control should be clearly limited to legislative activities, leaving the execution of the policies of the board to the necessary administrative officers, headed by the president.

The president is chief executive of the college, and all administrative officers should be under his direction and responsible to him. The board of control should act only on his advice and recommendation in the matters affecting the academic administration of the college.

The functions of the chief business officer include the care of funds and other permanent accounts, and the operation of the current budget. Although the college should be conducted in a business-like way, business policies can be tested only by their contribution to the academic aims of the institution. A separate office for promotion purposes seems to be desirable at institutions where considerable attention must be given to the matter of obtaining financial support.

The detailed academic administration of colleges and universities centers largely in the offices of deans and registrars. Both of these offices seem to be in a stage of evolution, resulting in considerable confusion as to the proper allocation of specific duties and powers. While it is possible to set up general principles governing the allocation of duties between these two officers, it is probably more satisfactory to make this allo-

cation along broad lines only, allowing each institution to set up the specific and detailed list of duties of these officers in the light of its own local situation.

Each faculty department should have the responsibility of nominating new members of its staff below the rank of head of department, and should have the initiative in the matter of courses to be taught and major and minor curricula to be offered. The faculty as a group bears the responsibility for recommending students for degrees, and for the general government of the student body. Where it is necessary for the faculty to delegate its powers, it seems better to delegate to a single responsible individual, rather than to a committee. There is possibly some advantage in a general faculty committee to maintain coordination with the board of control, and to represent the faculty viewpoint in matters of administration.

One of the unsolved problems of college administration is the control of athletics. While the various athletic associations and conferences have rules governing eligibility and defining amateur status, many of these rules can, in one way or another, be evaded. Certain specific defects in the present practice are pointed out. It is entirely probable that at least half of the colleges would be better off ultimately without intercollegiate athletics than they will be if they permit the present practices to continue.

CHAPTER IV

PHYSICAL PLANT AND EQUIPMENT

Value of Physical Plant

Table 15 presents data showing the increases which have occurred in the value of the physical plants of certain institutions from 1922 to 1926.

The data presented in Table 15 show that the value of buildings, grounds, and equipment for the eighteen institutions represented in the table increased thirty per cent during the four-year period from 1922 to 1926. All but two of the eighteen institutions show increases in the value of buildings, grounds, and equipment. Five of the institutions show increases of more than 50 per cent, and two of these five institutions show increases of more than 100 per cent.

Table 16 shows the value of buildings per student at nineteen institutions.

There is a great variation in the values of buildings per student enrolled in 1925-26. These values range from \$308 at Butler University¹ to \$6,666 at Randolph College. The average value of buildings per student for the eighteen institutions is \$839.

Since 1925-1926 the enrolment at Randolph College has increased almost 1,000 per cent. Although one new building has been constructed since 1925-1926, due to the increased enrolment, the value of the buildings per student enrolled has decreased from 1927-1928 to less than one-fourth that of 1925-1926. A great increase has occurred in the value of buildings per student at Butler University. Butler is now in the midst of a building program, constructing an entirely new plant on a new location. Although the enrolment of the institution has increased somewhat during the past two years, the increase in the value of buildings has been much more marked than the increase in enrolment.

¹Butler University has a new plant under construction on a new campus. These figures are for the old plant.

TABLE 15. VALUE OF BUILDINGS, GROUNDS, AND EQUIPMENT OF EIGHTEEN COLLEGES¹ IN 1922 AND IN 1926

INSTITUTIONS	VALUE OF BUILDINGS		VALUE OF GROUNDS AND EQUIPMENT		VALUE OF BUILDING, GROUNDS, AND EQUIPMENT		PER CENT OF INCREASE
	1922	1926	1922	1926	1922	1926	
Atlantic Christian Col- lege	\$ 70,000	\$ 70,000	\$ 42,000	\$ 60,000	\$ 112,000	\$ 130,000	16
Bethany College	424,000	610,000	85,000	105,000	509,000	715,000	40
Butler University	197,000	440,075	106,598	158,536	303,598	598,611	97
California Christian College	128,000	556,500	227,500	468,134	355,500	1,024,634	188
Carr-Burdette College	157,000	100,000	42,000	50,000	199,000	150,000	-25*
Christian College	450,000	535,065	131,000	130,443	581,000	665,508	15
Cotner College	242,000	373,000	55,000	90,458	297,000	463,458	56
Culver-Stockton College	145,000	377,802	72,500	72,870	217,500	450,672	107
Drake University	320,000	1,000,000	432,967	172,967	752,967	1,172,967	56
Eureka College	277,000	282,000	69,000	121,571	346,000	383,571	11
Hiram College	301,738	451,680	100,741	125,930	402,479	577,610	43
Lynchburg College	236,939	327,645	148,040	172,902	384,979	500,547	30
Missouri Christian College	66,500	80,000	15,000	6,000	81,500	86,000	6
Phillips University	275,000	283,500	108,715	113,550	383,715	397,050	3
Spokane University	112,000	95,000	48,000	90,000	160,000	185,000	16
Texas Christian University	953,346	610,030	216,357	351,185	1,169,703	961,215	-18*
Transylvania College ²	317,711	345,655	460,814	463,132	778,525	808,787	4
William Woods College	439,715	444,435	94,280	148,624	533,995	593,059	11
Total	\$5,112,949	\$6,962,387	\$2,455,512	\$2,901,302	\$7,568,461	\$9,863,689	30

¹The data for this table were obtained from the annual reports of the Colleges to the Board of Education of Discl-
ples of Christ.

²This includes The College of the Bible and Hamilton College.

*Decreases.

TABLE 16. VALUE OF BUILDINGS, AVERAGE ENROLMENT DURING THE REGULAR SESSION, AND VALUE OF BUILDINGS PER STUDENT ENROLLED,¹ 1925-1926

INSTITUTION	VALUE OF BUILDINGS	AVERAGE ENROLMENT DURING REGULAR SESSION	VALUE OF BUILDINGS PER STUDENT ENROLLED
Atlantic Christian College	\$ 130,000	142	\$ 915
Bethany College	610,000	303	2,013
Butler University	440,075	1,427	308
California Christian College	556,500	320	1,739
Carr-Burdette College	100,000	76	1,316
Christian College	535,065	326	1,641
Cotner College	373,000	307	1,215
Culver-Stockton College	377,802	252	1,499
Drake University	1,000,000	1,715	583
Eureka College	262,000	337	777
Hiram College	451,680	356	1,268
Lynchburg College	327,645	232	1,412
Missouri Christian College	80,000	72	1,111
Phillips University	283,500	710	399
Randolph College	100,000	15	6,666
Spokane University	95,000	111	856
Texas Christian College	610,031	1,102	554
Transylvania College ²	345,655	455	760
William Woods College	444,435	231	1,924
Total	\$7,122,388	8,489	\$ 839

¹The data for this table were obtained from the *Eleventh Annual Report of the Board of Education, Disciples of Christ, 1926*.

²Includes The College of the Bible and Hamilton College.

Utilization of Building Space

The writers were requested by the officers of administration of the several colleges and universities to study thoroughly the present utilization of building space at each of the institutions, and to make recommendations as to the needs for new buildings. This problem was studied as carefully as time would permit, and specific recommendations were included in the confidential reports prepared for the use of the officers of administration. The purpose of this phase of the investigation was to assist the college and university administrators in estimating the extent of building space required to care ade-

quately for the present and possible future educational work of the institutions and to assist in analyzing the present utilization of plant space. The data relating to enrolments were obtained from the offices of the registrars; those relating to plant space were obtained by a careful measurement of buildings and rooms, except for a few of the newer buildings for which architects' plans were available.

Table 17 shows the amount of floor space per student provided in a number of colleges and universities.

TABLE 17. SQUARE FEET OF FLOOR SPACE PER STUDENT AT TEN COLLEGES AND UNIVERSITIES

INSTITUTION	NUMBER OF SQUARE FEET PER STUDENT
Spokane University	150
California Christian College	190
Randolph College	216
Hiram College	219
Transylvania College	220
Eureka College	222
Lynchburg College	235
Christian College	262
Culver-Stockton College	284
William Woods College	316
Bethany College	334

The number of students which a college can accommodate is related more directly to the amount of instructional space than it is to the amount of total space. Consequently capacity should be shown in terms of instructional space as well as in terms of total space.

The total space of the college plant is classified as instructional space, accessory space, and combined space. "Instructional space" has been considered as all space used for the primary purposes of instruction, and includes all space suitable for classrooms, lecture rooms, and laboratories. "Accessory space" is subdivided into "administrative space" and "accessory space other than administrative." The term "administrative space" is used to designate all space such as offices, storage and supply rooms, janitor rooms, heating and power plants, and private laboratories. "Accessory space other than

administrative" includes museums, libraries, reading rooms, display rooms, locker-rooms, dressing and rest rooms, halls, corridors, stairs, literary society rooms, and space used by interests outside of the institution proper. "Combined space" is space used for recreation or administration, and also for instruction, such as offices and literary society rooms used as classrooms. Gymnasiums and indoor swimming pools have also been included as combined space. Table 18 shows the classification of building space in twelve institutions.

TABLE 18. CLASSIFICATION OF BUILDING SPACE AT TWELVE INSTITUTIONS

INSTITUTION	PER CENT INSTRUCTIONAL SPACE	PER CENT ACCESSORY SPACE	PER CENT COMBINED SPACE
Transylvania College	16	67	17
Christian College	18	68	14
Hiram College	20	64	16
Bethany College	22	68	10
California Christian College	23	57	20
Culver-Stockton College	25	30	45
Lynchburg College	25	24	51
William Woods College	27	59	14
Randolph College	29	71	00
Phillips University	32	46	22
Spokane University	33	20	47
Cotner College	34	51	15

The data included in Table 19 show the number of square feet of instructional space per student in the institutions listed.

TABLE 19. INSTRUCTIONAL SPACE PER STUDENT AT ELEVEN INSTITUTIONS

INSTITUTION	SQUARE FEET PER STUDENT ¹
William Woods College	85
Eureka College	80
Bethany College	73
Culver-Stockton College	71
Randolph College	63
Lynchburg College	56
Spokane University	50
Christian College	47
California Christian College	44
Hiram College	44
Transylvania College	35

¹The average enrolments for the two semesters of the regular session were employed in the computation of the number of square feet of floor space per student.

It is not easy to interpret the data included in the tables and figures presented in this chapter relating to plant space and its utilization because of the variety of factors to which consideration must be given. In an attempt to interpret the data presented in Tables 17, 18, and 19, two questions arise: first, how many square feet of instructional space per student are necessary in order that an effective educational program may be developed; second, what per cent of total space should be given over to instructional purposes. Cotner College and Transylvania College do not differ greatly in size; yet the per cent of total space given to instructional purposes is almost two times as great at Cotner College as at Transylvania College. Eureka College and Transylvania College do not differ greatly in size; yet, Eureka College has 80 square feet of instructional space per student while Transylvania College has only 35 square feet of instructional space per student.

The amount of instructional space required per student for effective instruction bears some relation to the number of students enrolled in an institution. Because of difficulties involved in the organization of class schedules in such a way as to utilize effectively classroom space, more instructional space per student is needed at small institutions than at large ones. This is true particularly with respect to laboratory space since laboratories must be equipped for specific types of work. It is true, also, that institutions offering a variety of laboratory courses need more instructional space per student than institutions of the same size with limited laboratory offerings. The ratio of accessory space and combined space to instructional space is also dependent to some extent upon the size of an institution. The percentage of total space available for instructional purposes ought to be greater in relatively large institutions than in smaller ones. In so far as laboratory space is concerned, an institution with an enrolment of 200 students may need only one-third or one-fourth as much classroom and laboratory space as an institution with 1,000 students; however, due to the varied uses made of rooms such as chapels and auditoriums, as well as to the types of activity carried on in gymnasiums and

swimming pools, an institution with 200 students enrolled is almost certain to need for purposes such as a chapel, auditorium, gymnasium, and swimming pool, much more than one-third or one-fourth of the amount of space needed for such purposes in an institution of 1,000 students. This means that the total number of square feet of space per student must be larger in small institutions than in large ones, if both types are to have ample space within which to carry on their activities.

As a means of increasing the utilization of plant space, a number of the colleges surveyed have adopted a policy of distributing classroom and laboratory instruction over forty-four periods during each week. This allows eight recitation periods on Monday, Tuesday, Wednesday, Thursday, and Friday, and four recitation periods on Saturday. It is reasonable to assume that a room is not being used to capacity until it is used forty-four periods a week.

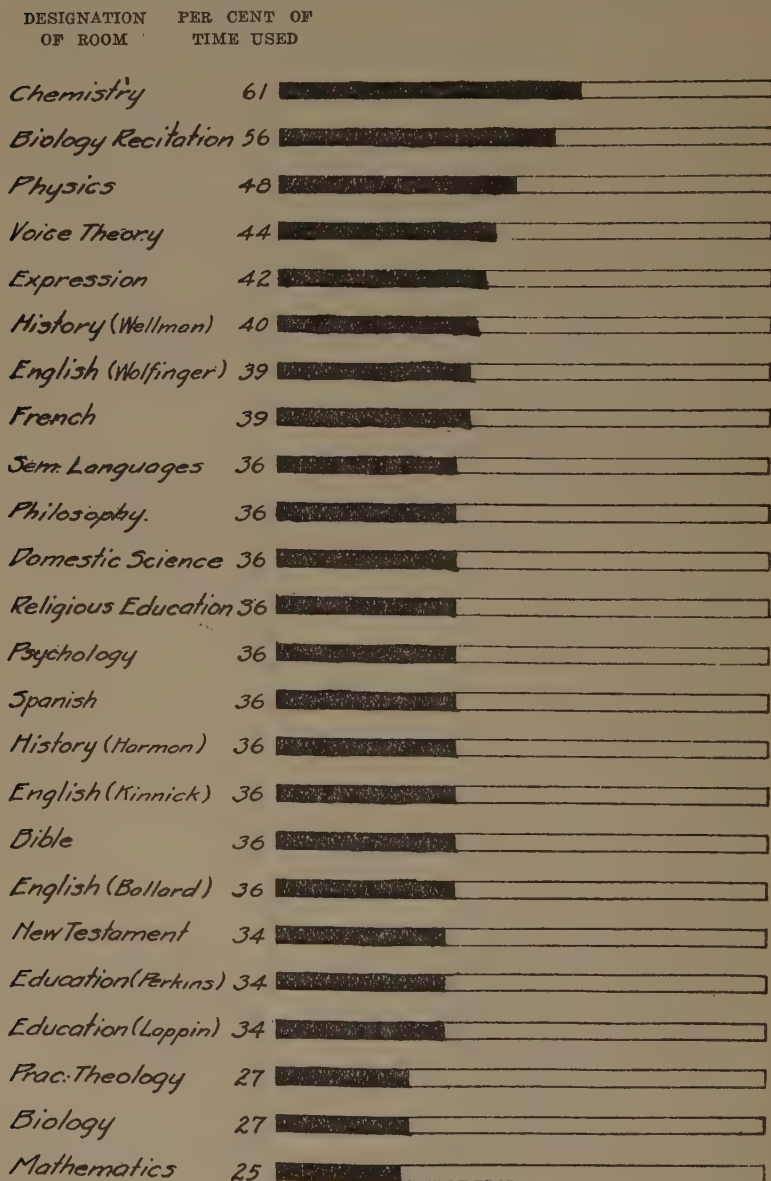
Certain measures of utilization of space have been developed in connection with the surveys of the Disciples institutions. Data showing the use of three of these measures will be presented for Phillips University. This institution has been selected for illustration because it has, of all the institutions surveyed, the highest utilization of space.

The first of these measures relates to the number of periods per week that classrooms and laboratories are occupied. If it be assumed that the number of periods in the week is 44, then the per cent that any room is utilized may be calculated by dividing the number of periods it is actually in use by 44. Figure 4 presents such a computation for each room at Phillips University.

An examination of Figure 4 shows that the per cents of time classrooms and laboratories are occupied at Phillips University, computed upon a basis of a forty-four hour week, range from 61 to 25, with a median of 36. The median situation indicates that on the average classrooms at this institution are occupied only 16 out of the 44 possible periods during the week.

During the time classrooms and laboratories are occupied, the number of students using the rooms is often much smaller

FIG. 4. PER CENT OF TIME CLASSROOMS AND LABORATORIES ARE OCCUPIED, COMPUTED ON A BASIS OF A FORTY-FOUR HOUR WEEK



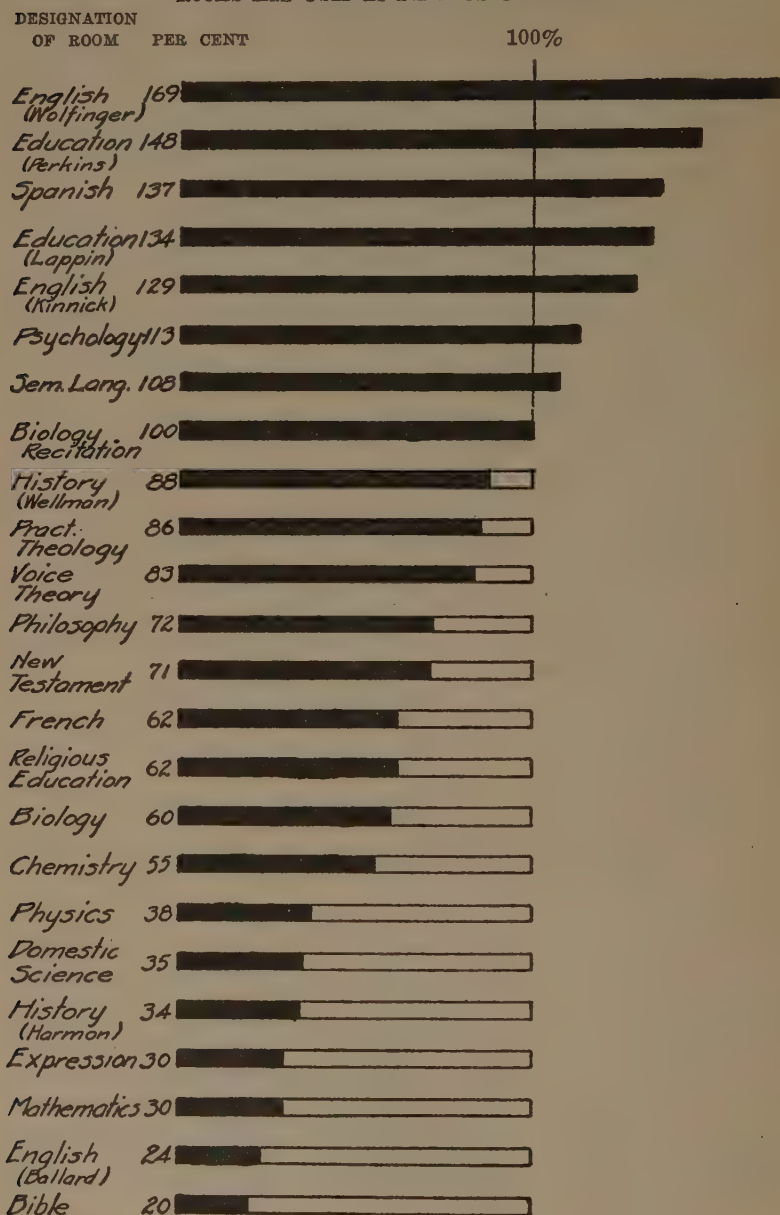
than the capacity of the rooms. In some of the institutions studied, the average number of students enrolled in the several classes is less than one-third of the capacity of the average classroom. A situation of this kind results in great waste in instructional space. A measure of utilization of space on this basis may be termed "per cent of utilization during periods used."

At Phillips University a peculiar condition prevails in that some rooms are used during certain periods beyond their true capacity. At first this may seem impossible; but the impossible is being accomplished at Phillips by crowding into certain rooms during certain periods a large number of folding chairs which are placed in the aisles, around the walls, and in the front part of the room, so that a class much larger than the capacity of the room is accommodated after a fashion. During periods when the large class is not meeting, the folding chairs are taken from the room.

The use of a classroom beyond its true capacity cannot be too strongly condemned. The handicaps placed upon both students and instructors under such conditions as prevail at Phillips University are enormous. It should be clearly understood that a situation showing a utilization, on the basis of enrollments in classes during periods used, of more than 100 per cent. is worse, educationally, than a failure to utilize up to 100 per cent.

In other institutions where this technique was employed in measuring utilization of space, the capacity of laboratories is taken as the number of students for whom equipment is available at any one time. The capacity of classrooms is taken as the number of seats available for use. Obviously this technique was not possible in studying the situation at Phillips University, where folding chairs are brought into some rooms during certain periods to accommodate large classes. The measure of "capacity" used in this case was based on the floor area, sixteen square feet in the classroom and twenty-five square feet in the laboratory being counted as the area for one student. These figures are near the average floor area per

FIG. 5. PER CENT OF CAPACITY UTILIZED IN EACH ROOM DURING PERIODS ROOMS ARE USED AT PHILLIPS UNIVERSITY



student in other institutions surveyed. "Capacity," in the case of classrooms at Phillips University, then becomes the number of square feet divided by sixteen, and in the case of laboratories, number of square feet divided by twenty-five. A calculation on this basis results for seven rooms in a figure of over one hundred per cent utilization during the periods used.

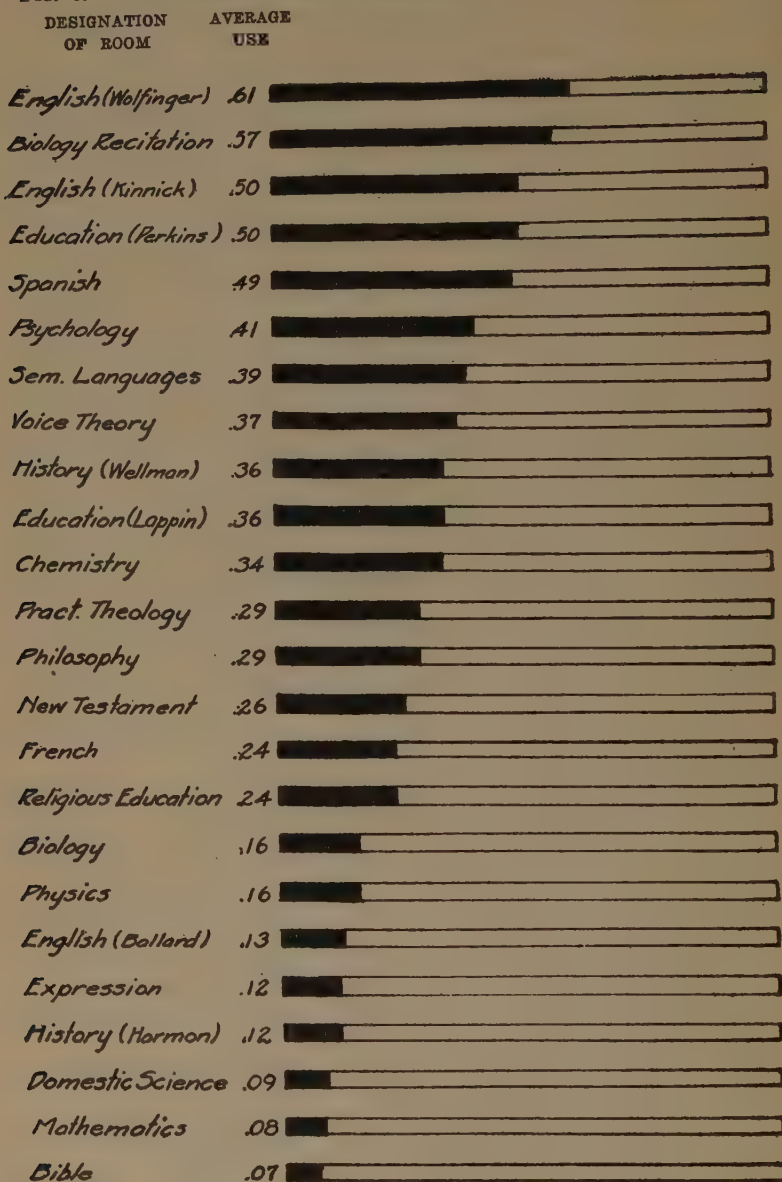
Figure 5 shows for Phillips University the per cent of capacity utilized in each room during the periods when the room is in use.

The data seem to indicate an extraordinarily high degree of utilization of room space during the periods the rooms are used, particularly for ten or eleven of the rooms. However, when the data in this figure are compared with those in Figure 4, it is evident that all of these rooms, which are badly overcrowded when in use, stand idle more than half the periods of the week.

Obviously neither of the measures used in the two preceding figures, namely, "per cent of periods used" or "utilization during periods used," results in a complete measure of the degree to which the plant is utilized. Each of the measures is helpful in an analysis of the situation, but a combination of them is necessary in order to picture properly the total situation. Such a combination of the two measures may be made by simply multiplying them together. The resulting figure may be termed "average use." It is clear that if a given room is used for only 50 per cent of the possible periods, and during the periods it is used the capacity is utilized only to the extent of 50 per cent, the true utilization of the room is only 25 per cent ($.50 \times .50$). The measure of "average use" may be calculated also by multiplying the capacity of the room by 44 (periods per week) and dividing this product into the sum of the enrolments of all classes meeting in the room, each period during which the room is used being counted as one class. In obtaining "average use" by this method, laboratory sections meeting for two-hour periods are considered as two classes.

The data for "average use" of classrooms at Phillips University are shown in Figure 6. As previously explained,

FIG. 6. THE AVERAGE USE OF CLASSROOMS AT PHILLIPS UNIVERSITY



“average use” is the product of the “per cent of periods used” and the “utilization during periods used.” “Average use” may also be obtained by dividing the sum of the enrolments of all the classes meeting in a room by the product obtained by multiplying the capacity of the room by 44.

This figure shows that, in spite of the overcrowding of rooms at Phillips University, not one of the rooms is used to the extent of two-thirds of its possible utilization, and only four are used to the extent of half or more of their possible utilization. The figures for the institution as a whole show that the present situation takes advantage of only 29 per cent of the possible utilization of space.

As previously stated, data from Phillips University have been used to illustrate the calculation of utilization of space because this institution presents the highest utilization of any of those surveyed. Table 20, which follows, shows the “average use” of classrooms and laboratories in nine institutions. The average use of instructional space for an institution is obtained by adding the number of students meeting in all of the rooms during all of the periods of the week, and dividing this sum by the product of the combined seating capacity of all rooms used for instructional purposes and the number of periods in the week (44).

TABLE 20. AVERAGE USE OF INSTRUCTIONAL SPACE AT NINE INSTITUTIONS

INSTITUTION	AVERAGE USE RATIO
Culver-Stockton College	.12
Bethany College	.13
Eureka College	.13
Transylvania College	.14
William Woods College	.16
Lynchburg College	.18
Christian College	.22
Hiram College	.23
Phillips University	.29

Table 20 shows that the “average use” for the nine institutions represented ranges from 12 per cent at Culver-Stockton to 29 per cent at Phillips University. The median institution is William Woods College with an average use of 16 per cent.

TABLE 21. CAPACITY¹ AND NUMBER OF STUDENTS OCCUPYING CLASSROOMS AT BETHANY COLLEGE DURING EACH PERIOD OF A FORTY-FOUR HOUR WEEK

DAY	PERIOD								PERIOD							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
Oglebay #5 Capacity 42 (58)																
M		5	5													
T		1	8	8												
W			5													
Th			5	8	8											
F		1	5	8												
S			1	1												
Oglebay #4 Capacity 8 (42)																
M	7	7	7	7												
T					1	1										
W																
Th					1	1										
F																
S																
Oglebay #9 Capacity 48 (42)																
M	31	20	5	7		28										
T																
W				6												
Th	31	20	5	7		28										
F		11														
S																
Oglebay #3 Capacity 45 (42)																
M	12															
T		9														
W																
Th																
F	12	9														
S																
Oglebay #6 Capacity 44 (41)																
M	25	25	25	25	13	13										
T			9	9												
W				28	28											
Th				9	9											
F				28	28											
S				13	13											
Oglebay #11 Capacity 80 (77)																
M	20	20	20	20												
T																
W																
Th	31	31	7	7										28		
F																
S	31	31	7	7										28		

¹The figure first given for capacity represents the number of seats now in the room; the second figure, in parentheses, represents capacity in terms of 18 square feet per student for classroom and 25 square feet per student for laboratories.

Table 21 shows the capacity and number of students occupying six classrooms at Bethany College during each period of a forty-four hour week. These rooms are selected because they are typical of the use, not only of other rooms at Bethany College, but also of the typical rooms at other institutions.

In interpreting this table the reader should note two things; first, the size of the numbers in the squares; second, the number of squares in which no numbers appear. For example, Room 5 in Oglebay Hall has a capacity of 42 (in terms of number of seats) as shown in the first division of the table. The largest number of students reciting in the room at any one time is 8, during the third and fourth periods on Wednesday and the fourth and fifth periods on Friday. During 32 of the 44 periods suggested for class work each week, no students recite in this room.

Data relating to the utilization of instructional space at Eureka College are presented in another form on Figure 7. Each square represents the use of a classroom for one period on one day.

This figure is interpreted as follows: on Monday, Room 6 of Burgess Hall is not in use at any time during the entire day; Room 7 of Burgess Hall is used to its entire capacity during the fifth period, and is not used at all during the remainder of the day; Room 8 is used by classes with enrolments approximately one-third as large as the capacity of the room during the first and second periods, is not in use during the third period, is used by classes of varying sizes, all smaller than the capacity of the room, during the fourth, fifth, and sixth periods, and is not in use during the seventh and eighth periods. The ratio of the black space to the total space in each column on the figure represents the average use of the room in terms of a percentage of total possible use that would result if the room were occupied during forty-four periods each week and if all classes held in it were as large as the capacity of the room would permit.

Because of certain limitations, such as conflicts in arranging student schedules, a limited number of faculty members, the

necessity of using classrooms for offices, and the equipment of rooms for special purposes which do not permit their use for general classroom work, 100 per cent utilization of classroom or laboratory space is impossible in any institution. However, the utilization of space at a considerable number of the colleges surveyed appears to be much lower than is at all necessary for effective work. Yet, the administrators of some of these institutions state that they are now finding it difficult to accommodate all of their classes, and are proclaiming the needs of their institutions for additional classroom space. At some of the institutions the low percentage of utilization of space appears to be due in large part to poorly arranged class schedules; at other institutions it is due to buildings poorly planned for the purposes for which they were intended. At the latter institutions, the low average use of space cannot be raised except by increased enrolments. In buildings constructed with a majority of the classrooms of uniform size and with few offices for staff members, a large percentage of use cannot be attained. Uniformity in the size of classrooms inevitably means much waste of space, since classes vary greatly in size. Likewise, a lack of office space for members of the teaching staff results in waste of classroom space since classrooms must be used by teachers for offices.

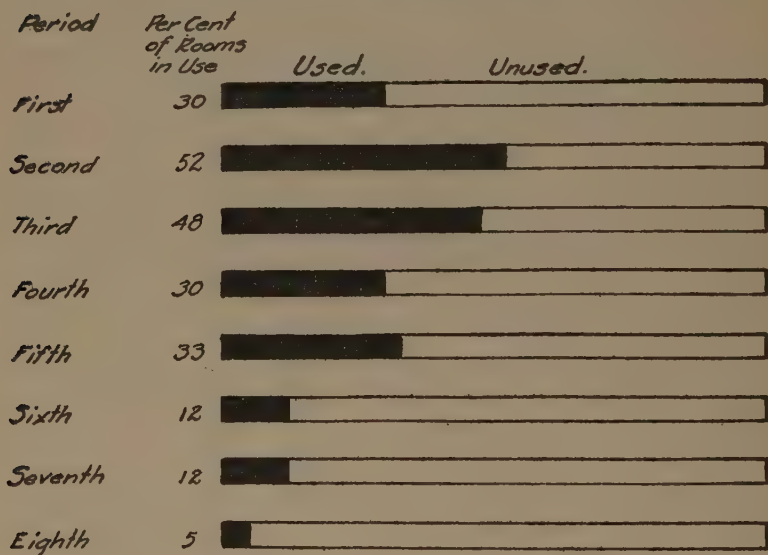
Poor organization of classroom schedules appears to be responsible to a considerable degree for low utilization of classroom space. Of course, this does not become serious so long as an institution can accommodate its enrolment without difficulty in the space available. However, before an institution without funds to permit the payment of salaries adequate to secure and retain efficient teachers enters into a campaign for funds for the construction of a new building for academic purposes, the class schedule should be scrutinized with care to make certain that available space is being utilized to maximum capacity.

Figure 8 shows the per cent of the rooms in use during each period of the day at the colleges surveyed.

These per cents of the rooms in use show that there are certain periods during the day which are more popular with

faculty members than other periods for holding classes. The writers doubt the educational advantage gained by crowding the bulk of the classes into a few periods of the day as is now done at many of the institutions. Although faculty members should have some initiative in suggesting preferable hours for their classes, it is necessary that one individual, preferably the registrar, should be finally responsible for arranging the class

FIG. 8. PER CENT OF THE ROOMS IN USE DURING EACH PERIOD OF THE DAY AT THE DISCIPLES COLLEGES



schedule. In institutions with limited funds for the current expenses of the institution, new buildings should not be constructed until the present buildings are utilized to as great a degree as possible without interfering with educational efficiency.

It has already been pointed out that many of the institutions are in a precarious condition and may possibly have to close their doors because of inadequate financial support. Such institutions should be particularly cautious about entering upon new building construction for classroom purposes. At prac-

tically none of the colleges should there be any attempt to raise funds for new academic buildings until the endowment and faculty salaries are on a basis which will care satisfactorily for the present enrolment of the institution.

Summary

During the period from 1922 to 1926, the total value of buildings, grounds and equipment at the institutions surveyed increased approximately 30 per cent. On the average \$839 is invested in buildings, grounds, and equipment, for each student enrolled.

At practically every one of the institutions surveyed, there was a low degree of utilization of building space. This seemed due to three causes: (1) the crowding of recitations into a relatively few periods in the week; (2) the mistakes of building construction in failing to provide rooms that correspond to the sizes of classes; (3) the failure to provide office rooms for faculty members. Even the most crowded institutions showed an average utilization of less than 30 per cent of the available capacity, and the median institution utilized only 16 per cent of capacity. While a perfect utilization of 100 per cent is not possible, yet the utilization should be much greater than it is at any of the institutions surveyed before additional classroom facilities are planned.

CHAPTER V

THE PROGRAMS OF STUDIES

The Students' Programs of Studies

The records of students at a majority of the colleges surveyed were examined for the purpose of discovering the extent to which there is satisfactory organization of the curricular work of the institutions. It is the opinion of the writers that student records of courses taken should in each case show a progressive emphasis on certain subjects and should also show that the requirements for elementary courses have been met early in the student's institutional career. It is difficult to have well organized classes unless both of these characteristics appear.

The examination of records showed considerable variation among institutions with respect to the extent to which the work of students has been systematized. A large percentage of elementary work characterized a majority of the programs of students taken at some of the institutions, and a considerable number of the records at all of the institutions. Most of the institutions offer no courses which are limited strictly to freshman and sophomore students; students classified as seniors can obtain full credit for any course for which they may enroll. As a result of this situation, the typical student takes many freshman and sophomore subjects during his junior and senior years. Colleges need to make more rigid requirements concerning course prerequisites, and to organize their classes in such a way as to make greater distinction between advanced students and students taking the work of the first two years. Not only should there be a larger number of courses limited to advanced students but a more effective method of requiring advanced students to take courses other than those at an elementary level ought to be devised.

With respect to the criticism made above, it appears probable that the colleges surveyed are no worse off than many other institutions of higher education. The Indiana survey report¹ shows that a similar situation exists at some of the Indiana state-supported institutions. It appears probable that there will be less criticism of overlapping of the work of students in different classes in the future than there has been in the past at the colleges. During the past two years a number of these institutions have modified their requirements in such a way as to make it necessary for students to earn a certain per cent of the credits required for graduation in courses open to advanced students only. This is a change in the right direction. The recent action of Phillips University illustrates this change.

At the time of the survey of 1924, Phillips University had no regulations prohibiting graduate students and students in the upper years of the undergraduate colleges from taking a large percentage of their work for credit in classes open to freshman and sophomore students. This, in effect, tended to reduce the work of a majority of the courses offered to a level of difficulty suitable for junior-college students only. However, a recent action of the committee of deans has remedied this undesirable situation. To guide students in the proper sequence of subjects pursued in each department, courses are now marked A, B, C, D, E, and F, the letter following the course number indicating its general grade, as follows:

A—Elementary courses open to freshmen, requiring no prerequisite college courses. Courses approximately equivalent to these are given in high school.

B—More advanced courses open to freshmen and sophomores requiring no prerequisite college courses but usually requiring prerequisite high school courses in the same or similar subjects.

¹Indiana Survey Commission, *Report of a Survey of the State Institutions of Higher Learning in Indiana*, December, 1926, published by Board of Public Printing, State House, Indianapolis, page 163.

C—Courses requiring at least one year's college work in the same or kindred subjects. C courses follow regularly after B courses.

D—Advanced courses requiring at least two years of pre-requisite college training. They follow regularly after C courses.

E—Courses intended primarily for graduate students.

F—Courses limited to graduate students.

An undergraduate major now consists of a minimum of fourteen credit-hours earned in D or E courses in one department, together with a sufficient number of additional credit-hours earned in related departments to make a total of 30 hours from the group of departments. Students receive only one-half credit for courses of A rank completed during the senior year, and three-fourths credit for courses of A rank completed during the junior year. Senior students completing courses of B rank also receive three-fourths credit, only, on their work. As a means of eliminating lower-class students from advanced courses, one-half credit, only, is given to freshmen completing courses other than those of A or B rank. A minimum of nine semester-hours earned in courses of F rank is required of applicants for the B. D. degree.

Departmental Trends

Table 22 shows for Transylvania College the student-credit-hours taught by groups of departments for 1913-14 and 1923-24. This institution has been selected as an illustration of the trend in departmental enrolments because the situation there is typical of that at a majority of the colleges. The only point in which it differs from a majority of the institutions is that the courses in religion are not taught in Transylvania College but in The College of the Bible, an affiliated institution.

An examination of Table 22 reveals a decided increase in the total number of student-credit-hours taught in the college over the period of ten years represented. The Education depart-

TABLE 22. STUDENT-CREDIT-HOURS¹ EARNED AT TRANSYLVANIA COLLEGE BY GROUPS OF DEPARTMENTS FOR 1913-14 AND 1923-24

GROUP OF DEPARTMENTS	STUDENT-CREDIT-HOURS EARNED		PER CENT OF TOTAL STUDENT-CREDIT-HOURS	
	1913-14	1923-24	1913-14	1923-24
Foreign Languages	1,055	1,569	26.1	20.3
English	746	1,402	18.2	18.1
Mathematics and Science	1,413	2,294	34.9	29.9
Education	170	827	4.2	10.7
Philosophy and Social Science	645	1,604	16.2	20.8
Total	4,038	7,696		

¹The number of student-credit-hours for a class is obtained by multiplying the class enrolment by the number of semester-hour credits given for the course.

ment shows the most marked growth, rising from 4.2 per cent of the total number of student-credit-hours in 1913-1914 to 10.7 per cent in 1923-1924. Foreign languages have experienced an increase in the number of student-credit-hour enrolments, but a marked decrease in the percentage of the total student-credit-hour enrolments of the college. The same is true for mathematics and science. The decrease in the per cent of credits earned in foreign languages is a result of a falling off of Latin and German; the per cent of credits earned in French, Spanish, and Greek has not decreased, either at Transylvania College or at a majority of the institutions. At Transylvania, Latin dropped from 11.3 per cent of the total number of student-credit-hours earned in 1913-1914, to only 3.8 per cent of the total number of student-credit-hours earned in 1923-1924.

The large increase in student-credit-hours in Education over the ten-year period may be accounted for by two factors: (1) an increase in the professional requirements for teaching certificates, and (2) an increase in the percentage of graduates of Transylvania College entering the teaching profession. With respect to the latter point, Transylvania College is typical of privately controlled colleges having enrolments of from 200 to 1,000 students. During the past five years, more than

fifty per cent of all the students graduating from the institutions surveyed have entered the teaching profession.

Semester Hours Offered in Religious Training

In Table 23 below the number of semester-hours offered in the field of Religion is given for each of fifteen Disciples institutions. The offerings in the field of Religion and Religious Education are more extensive at the Disciples colleges than at similar institutions of other communions.

TABLE 23. SEMESTER-HOURS OF RELIGION¹ OFFERED AT FIFTEEN INSTITUTIONS

INSTITUTIONS	SEMESTER-HOURS OFFERED	YEAR OF DATA
Phillips University	211	1927-28
Drake University	136	1925-26
Butler University	136	1926-27
Transylvania College and The College of the Bible	105	1927-28
Spokane University	76	1926-27
Hiram College	59	1926-27
Bethany College	55	1927-28
Lynchburg College	53	1927-28
Eureka College	48	1927-28
California Christian College	48	1926-27
Culver-Stockton College	34	1927-28
Cotner College	26	1927-28
Carr-Burdette College	12	1925-26
Christian College	8	1927-28
William Woods College	6	1927-28

¹Courses of the following types are included: Old Testament, New Testament, Doctrine, Church History, Pastoral Theology, Religious Education, Missions, Christian Ethics, Delivery of Sermons. Only courses offered during a single year are included.

An examination of Table 23 shows that the semester-hours offered in Religion at the several institutions range from 211 at Phillips University to 6 at William Woods College. Lynchburg College is the median institution, with an offering of 53 semester-hours in Religion. The most important ways in which the curricula of Disciples institutions differ from those of institutions of a majority of religious denominations is that the emphasis given to the field of religion is greater, and the

emphasis given to the field of social science is less, at the Disciples institutions than at institutions of other religious communions.

Classification of Students

The programs of studies which institutions offer to their students depend to a considerable degree upon the classification of the students with respect to the level of their educational advancement. For example, four-year institutions having a large percentage of their students enrolled at the junior-college level, and comparatively few students in the senior-college division will find it very expensive to offer many elective courses to the senior-college students.

Not only does the classification of students affect the programs of studies which institutions offer, but the programs of studies offered likewise affect the classification of students. Unless institutions offer considerable opportunities for elective work, students will withdraw to enter other institutions. In four-year institutions this often results in a situation where a very large percentage of the students enrolled are students in the lower years.

Tables 24 and 25 show the per cents of the total number of students registered in each class at two institutions. These colleges have been selected for discussion because, with respect to

TABLE 24. CLASSIFICATION OF STUDENTS OF BETHANY COLLEGE FROM 1920-21 TO 1925-26

YEAR	PER CENT OF TOTAL ENROLMENT BELONGING TO EACH CLASS						TOTAL ENROL- MENT
	FRESHMAN	SOPHOMORE	JUNIOR	SENIOR	SPECIAL	GRADUATE	
1920-21	46	23	12	9	9	1	377
1921-22	38	25	17	16	3	1	286
1922-23	40	20	19	17	3	1	275
1923-24	42	25	13	17	3	0	308
1924-25	41	25	15	15	3	1	295
1925-26	43	20	18	14	3	2	315
Average Per Cent of Total	42	23	16	14	4	1	

the classification of students, they are typical of a majority of four-year institutions. Figure 9 shows the percentage of students of college grade at Bethany College classified as junior-college and senior-college students for a period of six years.

TABLE 25. CLASSIFICATION OF STUDENTS OF LYNCHBURG COLLEGE FROM 1918 TO 1925

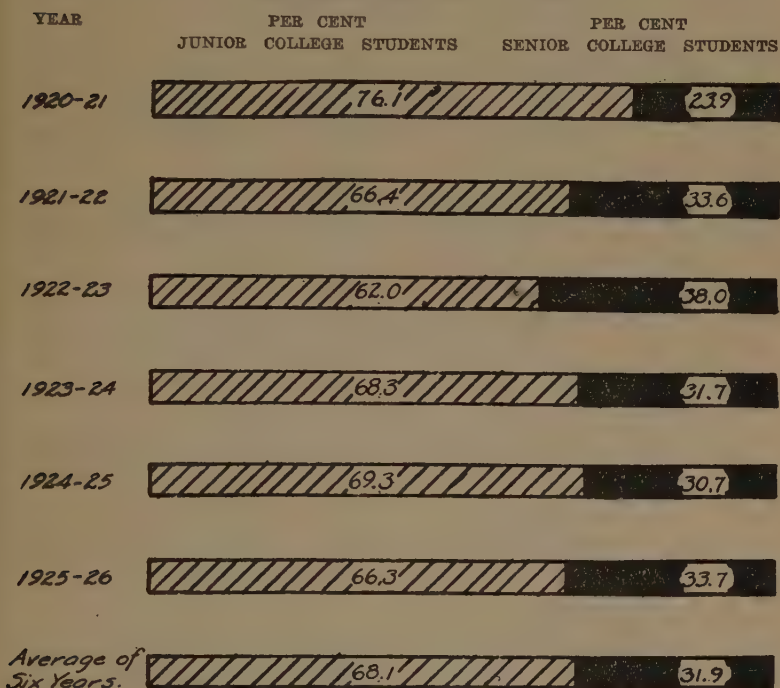
YEAR	PER CENT OF TOTAL ENROLMENT BELONGING TO EACH CLASS						TOTAL ENROL- MENT
	IRREGULAR	FRESHMAN	MAN	SOPHO- MORE	JUNIOR	SENIOR	
1918-19	6	31	34	9	14	6	139
1919-20	2	35	34	16	8	5	192
1920-21	4	24	31	24	11	6	173
1921-22	7	22	23	24	13	11	176
1922-23	0	10	50	15	16	9	199
1923-24	8	7	35	32	7	11	232
1924-25	7	0	39	25	20	9	210
Average Per Cent of Total	5	17	36	21	13	8	

The data presented above show that both Bethany College and Lynchburg College have for a period of years been largely junior colleges. It will be observed from Figure 9 that the largest per cent of senior-college students was 38 for the year 1922-1923 and that the smallest per cent of senior-college students was 23.9 for the year 1920-1921. The per cent of senior-college students for 1925-1926 was 33.7, or 1.8 per cent higher than the average for the six years. This situation at these two colleges with respect to the percentages of students classified in the upper and lower years is typical of the situation of a majority of the colleges surveyed by the writers.

Table 26, on page 114, shows for a large number of institutions the per cent of students classified at junior college and senior college levels.

From the data of Table 27 comparisons may be made among a number of American colleges with respect to the percentage of the freshman classes later enrolled as sophomores, juniors, and seniors.

FIG. 9. PER CENT OF STUDENTS OF COLLEGE RANK AT BETHANY COLLEGE CLASSIFIED IN THE JUNIOR COLLEGE AND SENIOR COLLEGE* DURING THE PERIOD FROM 1920 TO 1925



* Junior College Students are those of the Freshman & Sophomore years; Senior College Students are those of the Junior & Senior years. Graduate and Special Students are not included in this table.

TABLE 26. PER CENTS OF STUDENTS OF COLLEGE RANK CLASSIFIED IN THE JUNIOR COLLEGE AND SENIOR COLLEGE, FOR A NUMBER OF AMERICAN COLLEGES¹

INSTITUTION	PER CENT OF JUNIOR COLLEGE STUDENTS	PER CENT OF SENIOR COLLEGE STUDENTS
313 Colleges Reported by Bureau of Education, 1911	65.5	34.5
9 North Central Association Colleges, 1926	66.8	33.2
13 Illinois Colleges, 1917	68.0	32.0
Hiram College for 14 years	68.0	32.0
Bethany College for 6 years	68.1	31.9
Eureka College for 14 years	72.3	27.7
Lynchburg College for 14 years	72.7	27.3
Transylvania College for 16 years	72.8	27.2
Thirteen Kansas Colleges	73.2	26.8
Six Colorado Colleges, 1917	73.4	26.6
Culver-Stockton College for 7 years	78.5	21.5

¹The data for this table were secured from the following sources: for the 313 colleges reported by the U. S. Bureau of Education and for the six Colorado Colleges, from *Bulletin No. 5, Vol. VIII, Colorado Colleges*, published by Association of American Colleges, pp. 244, 245; for the thirteen Illinois Colleges from a *Statistical Survey of Illinois Colleges*, by B. Warren Brown, p. 53; for the thirteen Kansas Colleges, from *Survey of State Institutions of Higher Learning in Kansas*, by G. F. Zook, p. 152; for the nine North Central Association Colleges, from a cost study made by one of the writers and reported in the 1927 Annual Proceedings of the American Association of Collegiate Registrars; and for the remaining colleges from surveys made by the writers.

TABLE 27. PER CENTS OF FRESHMAN CLASSES LATER ENROLLED AS SOPHOMORES, JUNIORS, AND SENIORS, FOR A NUMBER OF AMERICAN COLLEGES¹

INSTITUTION	SOPHOMORE	JUNIOR	SENIOR
313 Colleges reported by U. S. Bureau of Education, 1911	66.0	52.0	46.0
7 Illinois Colleges, 1917	66.3	45.7	45.9
Transylvania College for 13 years	57.1	34.3	31.2
Hiram College for 11 years	64.6	44.8	40.3
Eureka College for 11 years	43.5	34.3	35.9
Eureka College, Class of 1924	61.7	48.1	44.4
Eureka College, Class of 1925	74.2	30.3	23.6
Lynchburg College, Class 1924	77.7	61.1	46.3
Lynchburg College, Class of 1925	75.0	40.0	50.0
Lynchburg College for 4 years	70.0	43.4	41.5
Culver-Stockton College for 4 years	52.5	43.1	44.3
Bethany College for 3 years	52.4	35.8	35.5

¹Data are from the same sources as those of Table 26.

Significant Tendencies in Higher Education

Attention will be called in this section to three movements in the field of higher education which seem to the writers to be of great significance to the curricular organization of the college. These three tendencies are: (1) the development of the junior college; (2) the development of orientation courses; and (3) the replacement of the elective system and its successor, the major and minor system, by a plan of fields of concentration for study.

Several authorities have pointed out the natural line of cleavage which exists between the sophomore and junior years of the four-year college. The work of the first two years is essentially a continuation of that type of general training which is characteristic of the secondary school. The aim is the completion of general training in these first two years of college, while the two latter years are primarily devoted to specialization. Two results from the recognition of this line of cleavage may be distinguished. The first is the creation of a separate institution, known as the junior college, which offers only two years of college work. The second result is a modification of the curriculum of the four-year institution to take into account the educational differences inherent in instruction at the two levels. In general the same principles of curriculum organization that should govern the junior college as a separate institution should also govern the first two years of the curriculum of the four-year institution.

In a majority of colleges, only forty or fifty per cent of the students entering as freshmen remain to graduate from the institution. The junior-college curriculum must therefore be something other than a preparation for advanced specialization—it must actually offer preparation for direct entrance upon life to those who do not enter specialized fields requiring further study. This fact implies that the junior college courses must be of worth in and of themselves, rather than merely courses which prepare for other advanced courses in the same field.

The second significant tendency in higher education, the introduction of freshman orientation courses, is a direct result of a clear realization of the aims of the junior college curriculum. Since the purpose of these two years is the completion of general training, it follows that this cannot be accomplished by isolated courses taught in water-tight subject matter compartments by narrowly trained specialists interested primarily in the development of a single detailed section of the field of specialization in which they are teaching. In the opinion of the writers, a lack of breadth is one of the most obvious weaknesses of the present programs offered in the junior-college divisions of four-year institutions. This appears to be somewhat less true at the institutions organized separately as junior colleges than at the four-year institutions; however, the criticism is valid for both types of institutions. Many of the instructors teaching courses at the junior college level are so imbued with the idea that their courses must be thorough, logically organized, and academically respectable, that they fail to accomplish in these courses the type of general training which is the aim of the junior college. Some of the typical defects that may be mentioned are: (1) subject matter is organized upon a logical, rather than upon a psychological basis; (2) subjects are isolated from one another and from any social content, the staff members failing to realize that the separation of knowledge into so-called "subjects" is an arbitrary division, made for the convenience of investigators; (3) subjects are offered in such a manner as to be of value primarily for further specialization, and of interest only to one intent upon additional work in the same field.

A development that gives promise of overcoming these objections is the growth of orientation courses in the junior college. This significant experiment is now being tried in a number of the institutions surveyed. In a course of this type, the compartments into which knowledge has been artificially divided for the convenience of investigators are drawn upon just as

though no such separation had ever taken place. The material is taught as a preparation for intelligent citizenship, rather than as a foundation for later specialization.

The same type of development is going on within the various subject matter fields, where introductory courses, psychological rather than logical in their organization, are being offered. Such courses as unified mathematics, general biology, introduction to education, and introduction to social science are being developed in an effort to present the student the elements from these various fields that are of value for general, rather than specialized training. Within the next few years it appears probable that there will be developed in the better junior colleges and junior college divisions of four-year institutions, courses similar to those mentioned above in a number of different departments. These courses must be taught by instructors who not only have an extensive knowledge of their own fields but who have a broad cultural training as well. The writers believe that there is no place in the junior college, or in the junior college division of four-year institutions, for instructors who are narrowly trained specialists or for highly specialized courses of study.

The third significant tendency in curriculum organization of higher education to which attention is called relates to the grouping of curricular content in the student's four-year program. In the reorganization of the curricula for the senior college division of the four-year institutions, a majority of institutions of higher education have, in the opinion of the writers, failed to keep pace with the most advanced thought in the field of curriculum construction; this is indicated by a study of major and minor requirements.

The requirements of Cotner College, Phillips University, and Culver-Stockton College are typical of those of a majority of privately endowed American colleges with which the writers are familiar.

Cotner College has the following requirement relating to major and minor sequences:

"By the close of the sophomore year each student must have chosen some one department in which he will take a major of not fewer than twenty-four hours."

A student desiring to major in any department must select with the approval of the major department,

"Two minors of not less than twelve hours each along kindred lines with the major."

The requirement of Phillips University, as stated in the latest catalog available for reference, reads as follows:

1. *Major Subject.* Each student must select one department for his major subject, not later than the beginning of his junior year. He must complete in this department courses totaling not less than twenty-four (24) semester hours, nor more than forty (40) semester hours, of which at least fourteen (14) hours must be courses marked C or above.

2. *First Minor Subject.* Also, the student must select a second department for his minor subject, and complete a minimum of fourteen (14) hours of which at least eight (8) hours must be courses marked C or above.

3. *Second Minor Subject.* A second related minor subject must also be selected with conditions like those of the first minor.

Culver-Stockton College prints the following statement relating to group requirements:

"Not later than the beginning of the junior year, and preferably by the middle of the sophomore year, the student should select the departments in which he wishes to carry his major and minor. In the departments thus selected he will be required to complete, under the direction of the professors in charge, from 20 to 25 hours of work for the major, and from 10 to 15 hours of work for the minor."

The theory of major and minor groupings of courses is based upon the belief that intensive study in some two or three related fields is a necessary part of the training of the cultured individual. Even if the value of specialization in a narrow field be admitted for cultural purposes, the fact is that a considerable majority of the college administrators and staff members acknowledge that the specialization now attempted is

primarily for the purpose of vocational training.¹ More than half of the graduates of the colleges surveyed enter directly into the teaching profession. A large majority of the remainder are taking training specifically for religious service, or are taking pre-medical or pre-legal training.

During the past three years a number of the colleges have strengthened their group requirements. These changes have undoubtedly accomplished beneficial results in that students have been prohibited from unwise free election of courses scattered over a variety of fields. The present type of group requirements, if the groups are properly selected by the student, forms a better basis for vocational training than the former system which narrowly prescribed a considerable number of courses for all students, regardless of their vocational interests, and then permitted the student to elect freely the remainder of his courses. Consequently, the strengthening of group requirements appears to have been, on the whole, beneficial. However, in view of the present situation with respect to the rather clearly defined vocational interests of college students, the common arrangement of major and minor sequences as illustrated by the requirements of Cotner College, Phillips University, and Culver-Stockton College could well be displaced, or at least supplemented, by the plan of prescribed curricula for the various vocations.

The failure to acknowledge the vocational purpose of the last two years of the four-year college program has operated to embarrass many of the colleges in the development of their functions as training schools for high school teachers. Kelly has pointed out that college faculties have been hesitant about acknowledging the distinction between the preparation of students for teaching in the high school and the general requirements, developed from a cultural viewpoint, which are held for graduation from the college.² This is true in the case of a majority of the colleges represented in this report. Although

¹For a further discussion of this point see Frederick J. Kelly, *The American Arts College*, published by the Macmillan Company.

²*Ibid.*, p. 53 ff.

more than half of their graduates enter at once into teaching, yet some of these colleges refuse, or at least hesitate, to acknowledge themselves as teacher-training institutions in a vocational sense.

When specialization is primarily for vocational ends, it appears inadvisable to require for graduation an equal number of hours in major and minor subjects for all departments. Specialization requires a much longer period of time for some callings than it does for others.

The development which seems to the writers to offer the greatest promise for solution of the question of specialization for vocational aims is the organization of fields of concentration of study. Under this plan, the student, guided by the proper faculty authority, would choose those studies which would be of value in attaining vocational competency, regardless of the subject-matter departments in which such courses or studies may happen to be offered. Under this plan the curriculum becomes a matter of separate adjustment for each individual student, and the needs of the individual, not the total credit hours received in a particular department, become the criterion for the organization of the student's program of studies. The development of curriculum organization in terms of fields of concentration seems to be just as much of a forward step as was the major and minor system when it supplanted the free elective curriculum organization.

The Curricula of a Modern College

A discussion similar in general scope and conclusions to that presented above was included in the survey of Transylvania College. Acting upon the suggestion of the survey, the faculty, under the direction of the president and dean, modified the curricula. The changes made at Transylvania College are described in this section merely for suggestive purposes. The writers hold no brief for these curricula in all of their details; however, they are of the opinion that the curricula described

are in a general way in accord with the best modern tendencies. It will be noted that the terms "major and minor" are retained, although there is some attempt to develop fields of concentration. This probably represents an intermediary step between the major and minor system and the full concept of the modern development of fields of concentration. Possibly the junior college requirements are too narrow in scope to meet the needs of all students. Some junior college students already have in mind the profession or vocation for which they intend to prepare and they should, in some instances, be permitted to take pre-professional or pre-vocational courses as parts of the general cultural curriculum of the junior college. Possibly the principle of orientation courses should be carried further.

A description of the courses of study of Transylvania College, as prepared for the catalog of the institution, is presented below:

THE COURSE OF STUDY

The course of study is organized in two fundamental units. The first unit, known as the General Culture Unit, comprises the freshman and sophomore years. The second unit, known as the Specialization Unit, comprises the junior and senior years.

THE GENERAL CULTURE UNIT

Two primary objectives are had in mind as the organizing interests of the General Culture Unit. The first is the securing of appreciation on the part of the student of the natural and social world in which he is to live, of the spirit, movement, and achievements of civilization, and of the instruments by which mankind has evolved his ideas, his institutions, his culture, and his purposes, all of which taken together constitute his civilization. While exact knowledge is sought in the freshman and sophomore years, the principal objective is the orientation of the mind of the student through insight and outlook and intelligent constructive attitudes toward himself, his physical world, and the society of which he is a part. The second objective is self-discovery on the part of the student, especially with reference to the work which he will do in life and by which he will make his contribution to society. The student is encouraged to keep his vocational choice open and flexible during these two years, or at least until he approaches the end of his sophomore year. Through an understanding of himself and his world the college seeks to assist the student

in making a study of his own individual capacities and specialized interests together with the major avenues of service whereby the manifold needs of society are met through the vocations.

With these objectives in mind, the student is introduced during his freshman and sophomore years to the structure and processes of his material and social world, and to the major achievements of civilization through a comprehensive survey of the Christian civilization of the West and the factors that have entered into its making; through one or more of the natural sciences such as chemistry, biology or physics; through a study of the function of quantitative measurement of unified mathematics; through the instruments of communication and record in his mother tongue and at least one other language; through social science, either in history, economics, or sociology; through an understanding of the nature and function of the mind in psychology; through an introduction to the fine arts; and through a knowledge of the care of the body in physical education beginning in physical examination and giving the student corrective training and skills in permanent recreational and play activities.

THE SPECIALIZATION UNIT

The last two years of the college course, on the other hand, are devoted to specialization through a system of carefully organized majors and minors in the student's fields of primary and secondary interest. Of these majors, four are non-professional. The non-professional group of majors consists of a major in literature, which may center in the Classics, a modern language, or English; a natural science major, which may center in chemistry, biology, or mathematics, as the student may elect; a major in social science, which may center in sociology, history, or economics, as the student may elect; a major in philosophy and psychology. Of these majors, six are professional. The professional group consists of a major in the Christian Ministry, a major in education, which may center in public education or in religious education; a major in medicine; a major in business administration and law; a major in journalism; and a major in home economics.

ARTICULATION WITH PROFESSIONAL SCHOOLS

The professional majors are closely articulated with professional schools to which the graduates of Transylvania and its associated colleges go after they have completed their work at Transylvania, so that the educational experience of the student is a unified and continuous experience from the time he enters the college up through the General Culture Unit until he has taken his professional degree in the graduate school of his choice.

OVERLAPPING CREDIT

Not only because of the insights, power, and reserves which are made possible only by broad cultural backgrounds, but also because the better professional schools require college graduation for entrance, it will be to the advantage of most students to complete their work for the bachelor's degree in Transylvania. However, whether from financial, time, or other consideration the student finds it to his advantage to do so, he may elect to apply the first year in his professional school upon his course for the bachelor's degree in Transylvania, so that the degree will be granted for three years in Transylvania College and one year in an approved professional school. Inasmuch as Transylvania College does not offer specifically professional courses in law or journalism the student who is majoring in these two fields and who finds it necessary to economize on time and expense may find it to his advantage to enter the professional school at the end of his junior year. Even in these fields it is greatly to the advantage of the student to complete his liberal arts course before entering upon his professional studies.

GRADUATE WORK

In the fields of the Christian Ministry, public education, and religious education it is possible for the student to pursue work leading to the Master's degree in Transylvania College.

A MAJOR

A major consists of 24 to 30 semester hours pursued in the field of the student's primary interest. Outside a few subjects in the case of some majors, the major is carefully built under the personal advice of the head of the department and authorized by him before the student enters upon his major, in order to bring the student's major into conformity with his individual needs. For the carrying out of the major program of study the student is directly responsible to the head of the department.

A MINOR

A minor consists of not less than 18 hours of consecutive work in the field of the student's secondary interest. The field chosen, however, must be closely related to the field of primary interest. If the student elects, he may pursue instead of the minor, 12 semester hours of consecutive work in each of two closely related fields of secondary interest. In either event, the minors must be carefully built in advance under the personal advice of the head of the department in which the student has elected to major, in collaboration with the professors of the minor subjects.

For a schematic arrangement of the General Culture Unit and Specialization Unit, the reader will consult the chart on page 124.

because intensive surveys of these institutions were not made; however, all three of them offer graduate work.

The Bible College of Missouri offers the Bachelor of Divinity degree to students who complete ninety hours of work in the institution or in other institutions of approved standing, provided such students have previously completed a four-year course in a standard college. At least thirty of the ninety hours work required must be taken at the Bible College of Missouri. With proper selection, thirty of the ninety hours may be counted from courses taken in pursuit of the undergraduate degree. The Bible College does not plan to provide a complete program of studies covering the three years of work required for the Bachelor of Divinity degree until more funds can be obtained with which to increase the size of the teaching staff. In the meantime, a portion of the work for the degree must be done in other approved schools. During the school-year 1926-1927, thirteen graduate students were enrolled in the Bible College of Missouri.

Culver-Stockton College offers one year of graduate study in Bible and Philosophy. The institution does not offer a graduate degree; however, credit for the courses taken may be transferred to certain universities selected for further graduate work. During the school year 1926-1927 only two students were enrolled as graduate students.

Phillips University limits its graduate work to courses offered in the College of the Bible. Two graduate degrees, the Master of Arts and the Bachelor of Divinity, are conferred upon students of this college. Every graduate course accepted toward the Master of Arts degree applies also upon the degree, Bachelor of Divinity. At the time the data for this report were obtained, four students were candidates for the Bachelor of Divinity degree and sixteen were candidates for the Master of Arts degree.

Transylvania College offers graduate work in the Department of Education only. The degree, Master of Arts in Education, is awarded to students completing one year of graduate work. Four graduate students were enrolled for graduate

work during the school year 1926-1927. These students are permitted to take some of their graduate courses in education at the University of Kentucky or in religious education at The College of the Bible.

The College of the Bible at Lexington offers graduate and professional work leading to the degrees, Master of Religious Education and Bachelor of Divinity. During the school year 1926-1927 there were seven graduate ministerial students enrolled in this institution.

Students of the Disciples Divinity House are enrolled as students of the University of Chicago. Omitting these students from our consideration, the five institutions offering graduate and professional work have a combined enrolment of 26 graduate and professional students. In no one of these five institutions are the present instructional facilities adequate to justify the offering of an extensive program of graduate or professional work. Although a number of well-trained and efficient men are now teaching on the staffs of these institutions, the average salaries of the faculty members ought to be increased considerably before an extensive graduate program is attempted. The training of members of the staff of some of these institutions is much lower than appears desirable for graduate work. Furthermore, the teaching loads of the members of the staffs are in some instances so heavy that emphasis upon graduate work does not seem advisable. Research and productive scholarship are considered as requisites for instructors of graduate students. There is practically no research and little productive scholarship carried on by members of the staffs in charge of graduate classes at any of these institutions. At the present time, library facilities are also entirely inadequate for extensive programs of graduate work.

One of the best measures of the effectiveness of instruction in educational institutions may be obtained by an examination of the records of former students continuing their training at universities or professional schools offering more advanced work. Measured upon this basis, the graduate and professional instruction offered at the five Disciples institutions

ranks high. With surprisingly few exceptions, the graduates attending institutions such as Yale University, Princeton University, and the University of Chicago have made excellent records in the latter institutions. The writers examined a number of letters from administrative officers in the universities mentioned relating to the advanced work of former graduate students of Disciples institutions. Almost all of these students received full credit for the graduate courses completed at the Disciples institutions, and in addition earned excellent grades in the courses which they pursued at the larger universities. Regardless of the facts mentioned above, however, the writers doubt the advisability of offering at the present time at any of the above mentioned institutions a full program of work leading to the professional degree, Bachelor of Divinity. The students desiring this work are still few in number; to make their training thoroughly effective, it is necessary for the institutions at which the work is pursued to offer a considerable number of courses open to seminary students only. If undergraduate students are permitted to enroll in all courses offered the quality of the work is likely to suffer and the courses become undergraduate courses. Limiting courses to graduate and seminary students only, when these students are few in number, is an expensive arrangement. The total funds available for educational purposes at the institutions offering advanced work are still relatively small compared with the needs of these institutions. It appears probable that these funds could be expended more profitably in making provision for a better quality of training for a larger number of less advanced students. The plan now employed by the Bible College of Missouri for advanced students might be advantageous for other institutions with limited funds which are now attempting professional or graduate work. From one-third to one-half of the work leading to the degree, Bachelor of Divinity, could be taken to advantage at one of the larger seminaries.

At some of the Disciples institutions it may be advisable to adopt a policy of awarding a Master's degree at the end of

one year of graduate work, and of offering no other graduate or professional degrees. The program of work leading to the Master's degree could then be so organized that the credits earned could apply upon the degree, Bachelor of Divinity. The work required for the Master's degree at Phillips University is now organized upon this basis.

Summary

An examination of the records of courses carried by students at the various institutions shows that large percentages of elementary work characterize a considerable number of the programs of students. This situation has resulted from a failure to organize classes in such a way as to make adequate distinction between courses for advanced students and those for students of the freshman and sophomore years. Some institutions have made commendable progress in overcoming this condition by classifying accurately all courses with respect to the college level upon which they should be taken, and then imposing a graduation requirement of a certain amount of work taken from courses at the upper levels.

Certain trends are apparent among the various subject-matter departments. When the general growth of the institutions is left out of account, the data show that foreign languages and mathematics and science are decreasing in the per cent of total work taken, English is remaining almost constant, while education and the social sciences are increasing in the per cent of total work carried by these departments. The institutions offer a rather heavy program in religious training, the median for the fifteen institutions examined being 53 semester hours in this field.

To a surprising extent four-year institutions are in reality serving principally junior-college students, the ratio of junior-college to senior-college students being approximately two to one. The implications of this fact have not been recognized; curricula are still planned as if every student would attend for four full years before leaving the college to take his place in society. Some adjustment is obviously necessary so that those

entering students whose expectancy is not a four-year college course may be able to complete a unified curriculum, possibly not more than two years in length, the content of which will be worth while in itself. The introduction of curricula at this level for specific prerequisite training for later professional specialization, such as pre-law, pre-medic, pre-dental curricula, is an illustration of an attempt to meet this problem.

Requirements for major and minor sequences are in need of revision at many institutions. One of the most outstanding defects in the present requirements is the failure to acknowledge the vocational objective of the students in the junior and senior years. Commendable efforts to improve these requirements have taken place at some of the institutions.

A few of the institutions advertise graduate work, principally in religion and associated fields. At none of the institutions is there a large number of graduate students, and no one of the institutions surveyed has available sufficient funds to put on any extensive program of graduate work on an adequate basis, particularly with respect to staff requirements and library facilities. However, students who have received graduate training in the Disciples colleges usually make good records when they transfer to other recognized graduate schools for the continuation of their study. It is recommended that until increased funds are available that no attempt be made to enlarge the program of graduate work, and there is evidence that it would be beneficial to limit the offering at some of the institutions now providing two or more years of graduate work to one year of work leading to the Master's degree.

CHAPTER VI

GRADE STUDIES

The problems involved in the distribution of the grades awarded students do not lend themselves well to statistical treatment for the colleges as a group because of the variety of grading systems employed. Some institutions award grades in the form of letters, while others employ a percentage basis of grading. Even among institutions issuing grades in the form of letters, there is a variation in the letters used and the number of different degrees of scholastic excellence provided for; and among institutions employing the percentage basis there is lack of agreement as to the per cent required for a passing mark.

A few years ago most of the institutions issued grades in the form of per cents. This system assumed that 100 per cent represented the answering perfectly of all the questions asked, or the doing as well as could be expected of all the assigned tasks. Such a system made possible the award of a relatively large number of different quality marks. The feeling arose that the distinction indicated by a difference of one or two per cent, for example that between a mark of 85 per cent and a mark of 86 per cent, was not readily distinguishable by most instructors. The suggestion was made that grades be issued in a somewhat coarser grouping, allowing for four or five distinguishable degrees of passing work and one mark for failing work. These coarse groups were frequently indicated by letters, such as A, B, C, D, and E, or by the initials of certain descriptive terms, such as P for Passed, U for Unsatisfactory, I for Incomplete, etc. During recent years such a system of grading has supplanted the older percentage system in a majority of the institutions surveyed.

The transition from the percentage system to the letter system involves the necessity of defining in some way the letters used to indicate the different grade groups. A number of in-

stitutions have defined the marks employed by indicating the percentage of students who should fall into each of the given categories on the basis of the curve of normal frequency. There is, however, no general agreement among institutions as to the per cent of students which under normal conditions should attain each grade. A second method of defining the various grade groups has been by the use of descriptive adjectives, such as exceptional, above the average, average, inferior, unsatisfactory, etc. This method of defining grade groups is open to the objection that there very likely will be no common understanding among the various faculty members of the meaning of these adjectives in their application to students' work.

A third method of defining the various grade groups has been through the distribution to faculty members of statistical summaries of the grades given by each instructor. Comparison can then be made by the faculty member of his own grade distribution with that of other instructors, and in this way a somewhat common understanding of the meaning of the various grade groups is arrived at. Kelly¹ reports that this method has done much to smooth out the radical departures from the generally accepted definition of the grade marks as normally found in college faculties. Recent investigations at the University of Kentucky are not so promising, indicating that the tables of grade distributions prepared at that institution and made available for the examination of staff members over a period of years have not resulted in improving the system of grading employed. After an extensive study of the operation of the grading system at the University of Kentucky, Mary Agnes Gordon states:²

"It had been thought that the plan (of making grade distributions available to staff members) was having the desired effect, accomplishing a more uniform system of marking. It was difficult to be convinced that the effect had been negative. . . ."

¹F. J. Kelly, op. cit., page 119.

²*Bulletin of the University of Kentucky, Proceedings of the Fourth Annual Institute for Registrars, April 1 to 10, 1926.* "A Study of Marking at the University of Kentucky" by Mary Agnes Gordon.

“ . . . the plan used at the University of Kentucky for the last seven years to encourage greater uniformity of marking appears to have had a ‘contrary effect.’ ”

The importance attaching to scholastic standing has resulted in an endeavor to express quantitatively the total standing of each student on the basis of quality marks. The device used has been the assignment of a certain numerical value to each different grade. These values have been variously denominated as credit points, honor points, quality points, grade points, etc. A typical plan is to allow three quality points for a grade of A, two for a grade of B, one for a grade of C, and none for grades of D or below. Each hour of credit earned is multiplied by the quality factor corresponding to the grade received, and the total is expressed as the student’s quality points for the semester in question. Thus a student who carries 15 hours of credit and makes a grade of B in each course would, under this system be said to have earned 30 quality points. The ratio of quality points earned to credit points made is frequently denominated the “standing” of the student.

Many institutions have made further use of these quality points by setting a certain minimum number as a requirement for graduation along with the requirement of a certain minimum number of credit hours. The most frequent practice is to assign as a minimum number of quality points the same figure as the minimum number of credit points. This is equivalent to requiring students whose average grade is not equivalent to that which gives one quality point for each hour of credit to spend additional time in the institution before being graduated.

Distribution of Grades by Classes

Table 28 shows the percentage distribution of grades earned at a college of 400 students, arranged by classes.

Table 29 shows for a second institution of approximately the same size, for each year of the college course, the average number of quality points earned per semester-hour by the classes graduating in 1923 and in 1924. In making the computations, grades were included for those students only who had completed all four years of the college course.

TABLE 28. PERCENTAGE DISTRIBUTION OF GRADES AT A COLLEGE OF 400 STUDENTS, ARRANGED BY CLASSES

GRADE EARNED	MEANING OF GRADE	PER CENT OF FRESHMEN RECEIVING GRADE	PER CENT OF SOPHOMORES RECEIVING GRADE	PER CENT OF JUNIORS RECEIVING GRADE	PER CENT OF SENIORS RECEIVING GRADE
A	Three grade points for each semester-hour	16	14	19	21
B	Two grade points for each semester-hour	28	34	33	35
C	One grade point for each semester-hour	32	31	34	30
D	Pass—no grade given	13	13	10	8
E	Condition—removed by additional work	5	4	2	3
F	Failure	4	3	1	0
X	Examination not taken	2	1	1	3
	Total	100	100	100	100

TABLE 29. AVERAGE NUMBER OF GRADE POINTS EARNED PER SEMESTER-HOUR BY THE CLASSES GRADUATING IN 1923 AND 1924 FROM AN INSTITUTION OF 400 STUDENTS

	CLASS OF 1923	CLASS OF 1924	AVERAGE OF TWO CLASSES
Points earned during freshman year	1.5	1.5	1.5
Points earned during sophomore year	1.5	1.5	1.5
Points earned during junior year	1.7	1.8	1.8
Points earned during senior year	2.1	1.8	2.0

An examination of Tables 28 and 29 shows that juniors and seniors tend to earn higher grades than freshmen or sophomores. This finding is typical of most institutions where such studies have been made. Evidently the standard of work required by the faculty is not raised from year to year in proportion to the increase in the ability of the students. There appears to be little reason why the standard of work required of members of the upper classes should be such as to make it less difficult for them to obtain high grades than it is for members of the lower classes. Unless the standard required of juniors and seniors is proportionately higher than that required of freshmen and sophomores, there is often a tendency among students to study less intensively in the junior and senior years of their college course. The reader should note

that the differences in the average number of grade points earned in the four classes, as shown in Table 29 are not due to the withdrawal of poor students, since, in obtaining the averages represented, only those students who had completed the four years of their college course were included.

What is the real significance of the fact that, in a majority of educational institutions, the average grade received by advanced students is higher than the average grade received by lower class students? Intelligence tests given in all grade levels of the schools show, not only that students as a group tend to progress somewhat uniformly from year to year in ability to do school work, but, also, that the elimination which takes place throughout the school course is of such a nature that the ability of a considerable number of students at any particular level of advancement educationally, if charted in the form of a frequency polygon, tends to be distributed in accordance with a normal frequency surface. A considerable number of pupils are either eliminated from school before the eighth grade is reached, or else they are retarded so that they never reach the eighth grade; yet, intelligence tests show that eighth grade pupils are distributed, with respect to capacity, approximately in accordance with a normal frequency surface. Likewise, the differences in ability among high school freshmen, among high school seniors, or among college freshmen are such that the abilities of each of these groups, when charted as a frequency polygon, assume the form of a normal frequency surface. There is little reason to believe that this same tendency does not appear with respect to college juniors or college seniors.

The data available from the colleges surveyed show that the elimination from the higher levels of intelligence is sufficient to justify the conclusion that the shape of a frequency polygon representing the intelligence of college sophomores, juniors or seniors will not differ greatly from the shape of a frequency polygon representing the intelligence of college freshmen. The two most important factors resulting in elimination of students from small colleges before the completion of their four-

year programs of work appears to be the withdrawal of those who fail to earn fair grades or better, and the withdrawal of those who wish to pursue courses in universities leading to professional or technical careers. The latter group is drawn very largely from among the superior students, and is a group relatively large in numbers.

In the light of these considerations, there seems to be little justification for awarding higher grades to seniors and juniors than to freshmen and sophomores; or, to put the matter differently, grades at all levels should be related to the relative achievement of the student in his own group, rather than related to an absolute standard which does not take into account the performance level upon which he is supposed to be working.

Distribution of Grades by Departments

The distribution of grades obtained by freshman students in each of the several departments of a college for a period of five semesters is shown on Figures 10, 11, 12, and 13.

The following significant facts appear in the data of these figures. The percentage of "A's" made by the freshman students during the five semesters varied from 8 in English to 39 in mathematics; the percentage of students receiving "A" in mathematics and also in biology is more than twice as great as the percentage receiving "A" in English, German, Spanish, education, or Biblical literature. The percentage of students receiving grades of "A" and "B" combined is, in this institution, more than twice as large for mathematics and also for biology as it is for Spanish. The percentage of students receiving "E's" and "F's" combined in Spanish is more than twice as great as the percentage receiving "E's" and "F's" combined in eight of the thirteen departments represented. The percentage of students receiving "D's," "E's," and "F's" combined in Spanish is more than twice as great as the percentage of students receiving "D's," "E's," and "F's" combined in six of the thirteen departments represented.

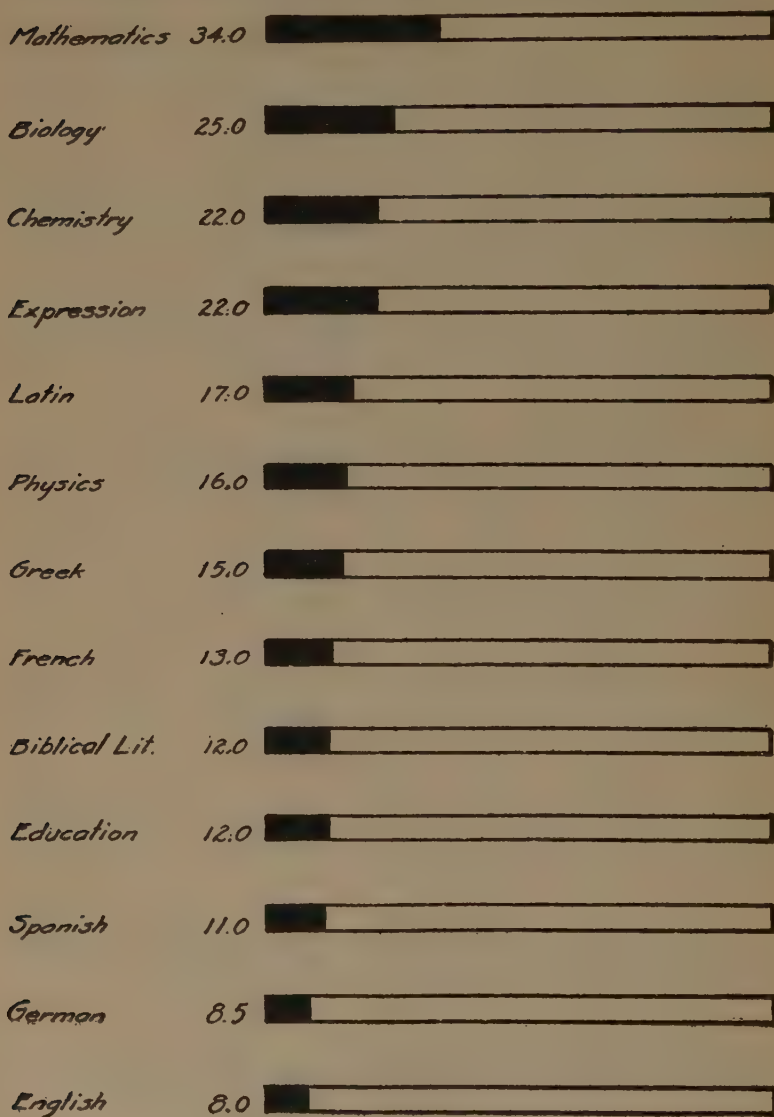
FIG. 10. PERCENTAGE OF FRESHMAN STUDENTS RECEIVING GRADES OF "A"
IN EACH OF THE DEPARTMENTS OF A COLLEGE OF 400 STUDENTS

FIG. 11. PERCENTAGE OF FRESHMAN STUDENTS RECEIVING "A" OR "B"
IN EACH OF THE DEPARTMENTS OF A COLLEGE OF 400 STUDENTS

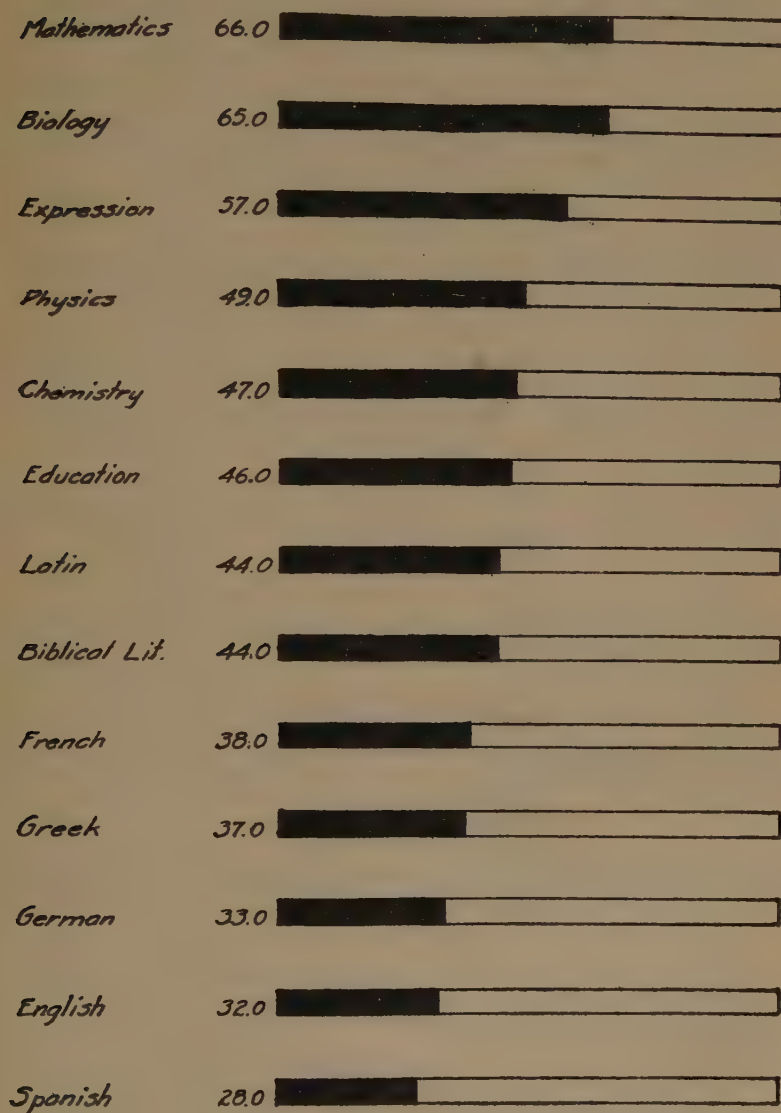


FIG. 12. PERCENTAGE OF FRESHMAN STUDENTS RECEIVING GRADES OF "E" OR "F" IN EACH OF THE DEPARTMENTS OF A COLLEGE OF 400 STUDENTS

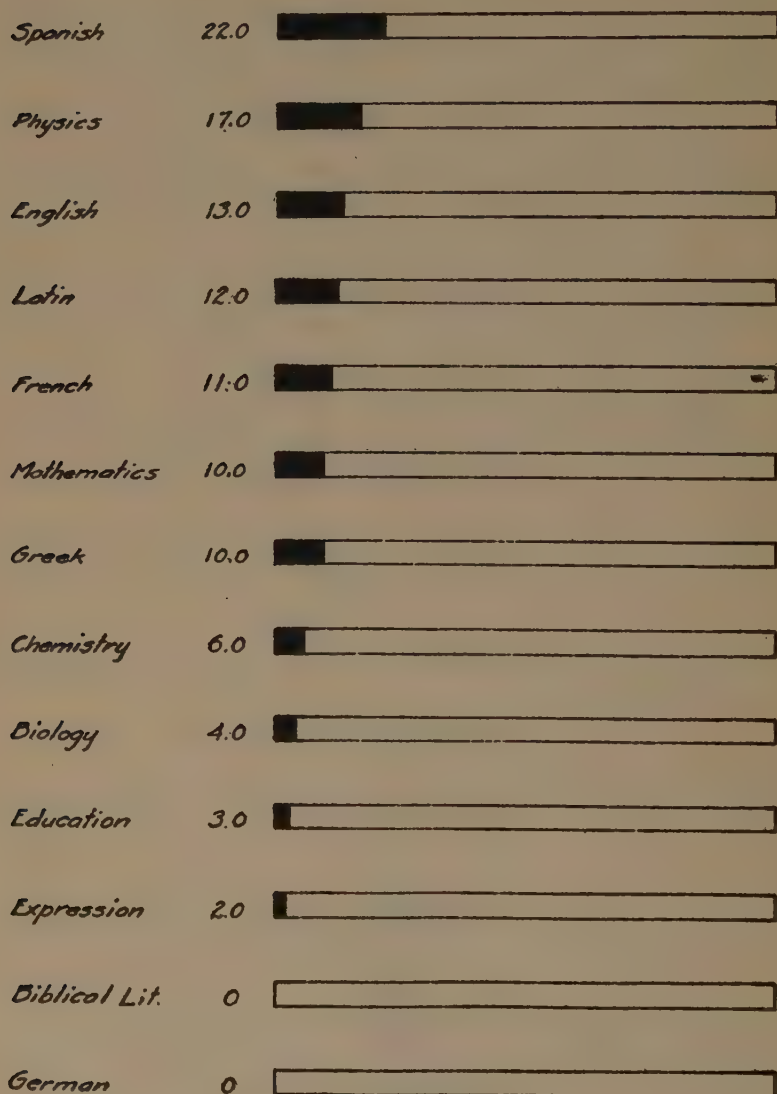


FIG. 13. PERCENTAGE OF FRESHMAN STUDENTS RECEIVING GRADES OF "D,"
 "E," OR "F" IN EACH OF THE DEPARTMENTS OF A COLLEGE OF
 400 STUDENTS

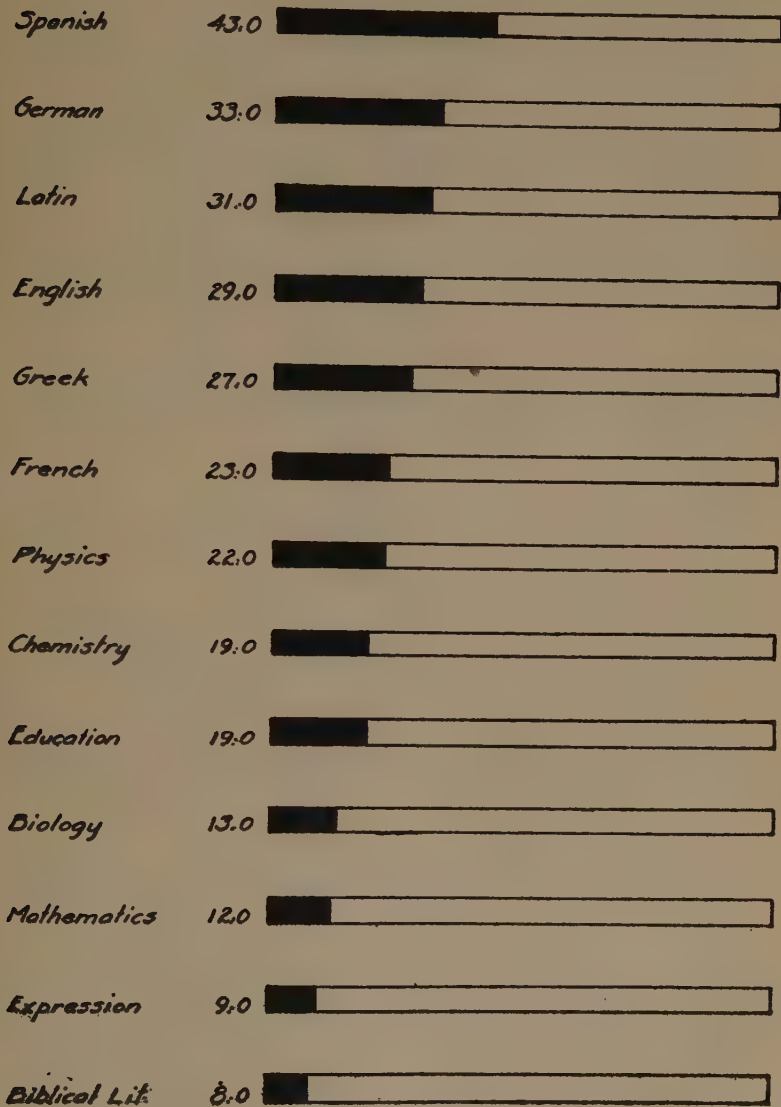


Table 30 shows the percentage distribution of grades, by departments, for a second institution for 1924-1925. At that institution the lowest passing grade is "D." A grade of "E" represents a condition, and a grade of "F" represents failure.

TABLE 30. PERCENTAGE DISTRIBUTION OF GRADES, BY DEPARTMENTS, IN A COLLEGE OF 350 STUDENTS

DEPARTMENTS	PER CENT OF TOTAL GRADES ISSUED WHICH WERE						
	A	B	C+	C	D	E	F
Economics	1	20	0	41	22	10	6
Education	9	57	0	30	4	0	0
Religious Education	17	33	17	17	12	2	2
English	9	21	21	18	15	7	9
History	13	17	20	27	11	10	2
Ancient Languages	21	51	10	7	5	6	0
Modern Languages	3	27	14	25	11	10	10
General Literature	14	28	9	18	22	9	0
Mathematics	19	28	17	17	7	6	6
Philosophy	18	42	9	27	2	1	1
Psychology	8	29	13	33	14	3	0
Sociology	4	35	0	44	8	9	0
Science	15	31	16	20	12	3	3
Public Speaking	9	69	2	15	0	5	0

An examination of Table 30 shows that the percentage of students receiving grades of "A" in the different departments varies from 1 in Economics to 21 in Ancient Languages; the percentage receiving grades of "A" and "B" combined varies from 21 in Economics to 78 in Public Speaking; the percentage receiving grades of "E" and "F" combined varies from zero in Education to 20 in Modern Languages; the percentage receiving grades of "D," "E," and "F" combined varies from 4 in both Education and Philosophy to 38 in Economics.

It might be argued that grades should be expected to average higher in some departments than in others. Data available from the several institutions indicate that such is not the case. Mathematics ranks highest in one institution and lowest in another with respect to the percentage of "A" grades given. Education ranks next to the highest in one institution and lowest in another in the percentage of "A" grades given. In

one institution Freshman English has the highest percentage of failures of all subjects taught; in another institution there are practically no failures in Freshman English, although 25 per cent of the students fail in Freshman Mathematics. No correspondence appears in these institutions between the type of subject and the percentage of high or low grades awarded.

Distribution of Grades by Instructors

Table 31 shows for a period of five semesters in the form of percentages the distribution of grades given by instructors at a college of 400 students.

TABLE 31. PERCENTAGE DISTRIBUTION OF ALL GRADES GIVEN BY FULL-TIME INSTRUCTORS IN A COLLEGE OF 400 STUDENTS FOR FIVE SEMESTERS

INSTRUCTOR NUMBER	PERCENTAGE OF TOTAL GRADES ISSUED WHICH WERE				
	A	B	C	D	F
1	34	18	22	16	10
2	29	37	23	9	2
3	31	62	7		
4	23	34	37	5	1
5	22	37	24	9	8
6	22	28	29	13	8
7	21	26	26	20	7
8	21	37	35	5	2
9	19	34	29	14	4
10	18	31	44	6	1
11	17	28	26	18	11
12	12	30	48	8	2
13	12	26	39	16	7
14	11	30	31	21	7
15	10	29	38	17	6
16	8	25	42	18	7
17	7	33	42	18	

An examination of Table 31 shows a wide range in the ranking of the several instructors. "A" grades range from 7 per cent to 34 per cent, "B" grades range from 18 per cent to 62 per cent, "C" grades range from 7 per cent to 48 per cent, "D" grades range from 0 per cent to 21 per cent, and "F" grades range from 0 per cent to 11 per cent.

Objective Tests and Comprehensive Examinations

The development of the new-type examinations may have an effect on the grading system. In addition to the virtue of greater objectivity in scoring, these new-type tests yield scores which are capable of much more exact interpretation than are grades in terms of either a percentage system or a letter system. With the new-type test it is possible to issue marks in the form of ranks in the class. It is certainly more meaningful for a student to be told that he stands in twenty-first place from the top in a class of thirty, than for him to be told that his grade is "C." When results on the new-type test have been tabulated for considerable numbers of students, it is possible to issue the mark for a given student's performance in terms of his percentile rank.

The development of the comprehensive examination is a necessary accompaniment to honors courses, but may be introduced even though the honors course is not used. The theory of the comprehensive examination is that, when once a student has chosen his field of concentration, he should evidence a mastery of that field before he can be considered to have completed his college course and become eligible for his degree. Thus instead of meeting the requirements for graduation entirely by the completion of a given number of small units, called courses, each of which is "passed" by itself without consideration as to its relation to the total field of concentration, the requirement of the passing of a comprehensive examination at the end of the period of study in the college forces the student to look upon his curriculum as an integrated whole. Thus the marks made in individual courses assume somewhat less of importance in the student's academic career.

It is conceivable that the further development of these two ideas, namely the new-type test and the comprehensive examination may affect profoundly the treatment of the grading system in colleges during the next decade.

Summary

The grading system used in marking students is a source of considerable dissatisfaction in many institutions. There seems to be a general tendency to issue more high marks in the upper class years than in the freshman and sophomore years, a tendency which cannot be justified by any sound theory of the meaning of marks. There seems also to be too large a variation in the average marks issued by different departments, indicating a failure to have a common understanding among departments as to the meaning of the various marks. Similar variations are shown when the marks issued by the different instructors are averaged. Such conditions have led to general dissatisfaction on the part of staff members with the operation of the grading systems, and there have been attempts to improve the condition in a few of the institutions by obtaining a general understanding among staff members that grades shall conform, in a rough way, to the normal frequency distribution.

Further development of the use of objective tests and the comprehensive examination may modify, during the coming years, the place of the grading system in the organization of the college.

CHAPTER VII

PROBLEMS RELATING TO STUDENTS

American educational practice today is being considered much more in terms of the individuals who are being educated than in terms of the subject matter to be taught, which was, until recently, the controlling viewpoint. In the elementary school, in the secondary school, and in the college there is a strong tendency to study carefully the problems of the learner and to make modifications and adaptations of the educational process from the viewpoint of the student. Today, as never before, the colleges are studying their students.

In this chapter four problems relating to students will be discussed: (1) implications from the use of psychological examinations; (2) student scholarship; (3) the working load of students; and (4) the causes of student withdrawals.

Psychological Examinations

The aim of this portion of the investigation is to obtain data which will throw light upon the values of a study of the student group by means of psychological examinations. Studies of the type here presented have been made in several of the colleges. Data for one college have been selected as typical of the findings for the group of institutions. These data were obtained from the scores made on the Thurston Psychological Tests for College Freshmen, and the grades earned by students for the first semester of their freshman year at the college.

The Thurston Psychological Tests employed are nine in number: Grammar, Completion, Arithmetic, Proverbs, Artificial Language, Reading, Opposites, Estimating and Reasoning. The students were ranked in each test separately. The student receiving the highest score received a rank of one; the student receiving the next highest score received a rank of two, etc.

The first semester grades of 101 students were available for comparative purposes. On the basis of grades earned, the stu-

dent receiving the highest number of quality points¹ was given a rank of one; the student receiving the next highest number of quality points, a rank of two, etc.

1. *Sex Differences*

For purposes of analytical study, the members of the freshman class were grouped upon the basis of the scores earned in the psychological examination and the quality points earned during the first semester, into four groups approximately equal in number. Table 32 shows the percentage of men and the percentage of women in each quarter of the class.

TABLE 32. PERCENTAGE OF MEN AND PERCENTAGE OF WOMEN IN EACH QUARTER OF THE CLASS WHEN ARRANGED UPON THE BASIS OF THE SCORES OBTAINED BY BOTH MEN AND WOMEN UPON THE PSYCHOLOGICAL EXAMINATION AND UPON THE BASIS OF FIRST SEMESTER GRADES

QUARTER OF THE CLASS	PSYCHOLOGICAL EXAM- INATION		FIRST SEMESTER GRADES	
	PER CENT OF	PER CENT OF	PER CENT OF	PER CENT OF
	ALL MEN	ALL WOMEN	ALL MEN	ALL WOMEN
	INCLUDED IN GROUP	INCLUDED IN GROUP	INCLUDED IN GROUP	INCLUDED IN GROUP
Upper	21.5	34.6	12.0	51.5
Second	33.0	8.0	27.5	26.0
Third	21.5	31.3	24.0	17.0
Lower	24.0	25.1	36.5	5.5

An examination of the data presented in Table 32 shows some striking contrasts in the percentage of men and women in each quarter of the class when arranged upon the basis of the psychological examination, as compared with the percentage in each quarter of the class when arranged upon the basis of the first semester grades. If the men and women in the freshman class had been equal in intelligence, as measured by the psychological examination, and equal in their scholastic records, there would have been 25 per cent of the men and 25 per cent of the women in each quarter of the class. However, the percentage of women in the first quarter, when arranged upon the basis of scores in the psychological test, exceeds by 13 the

¹For a discussion of quality points, see the preceding chapter.

percentage of men in the first quarter, and when ranked upon the basis of first semester grades, exceeds by 39 the percentage of men in the first quarter.

Combining the percentages for the first and second quarters, when ranked upon the basis of the psychological examination, it is found that 54.5 per cent of the men and only 42.6 per cent of the women are in the upper one-half of the class. This indicates that the average general intelligence of the men, when judged upon the basis of scores obtained upon the psychological examination, is slightly above that of the women, although the percentage of women who would be classed as superior and ranked in the upper quarter, exceeds the percentage of men who would be classed as superior and ranked in the upper quarter.

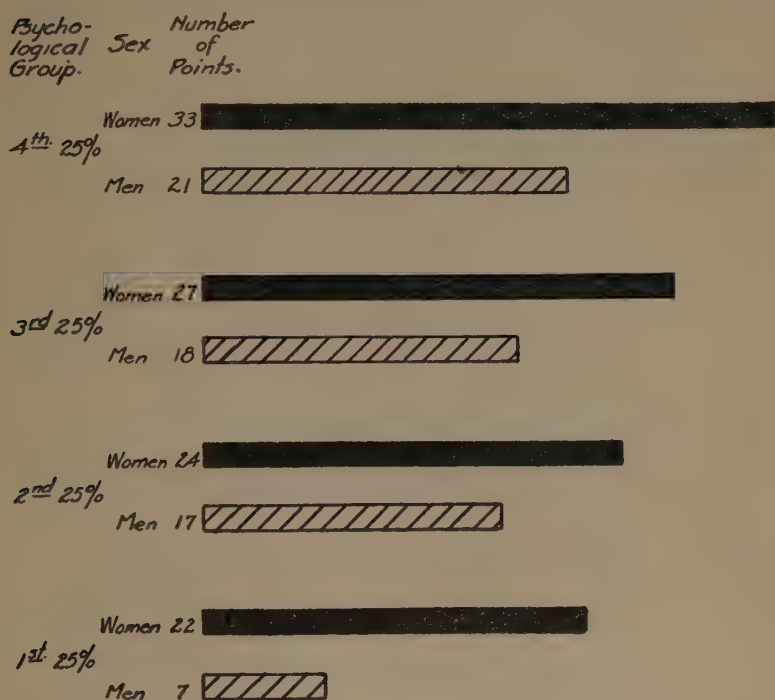
Although the men average slightly superior to the women in the psychological test, they fall far below the women in scholarship. Table 32 shows that 77.5 per cent of all the women members of the class and only 39.5 per cent of all the men of the class are in either the first or second group, when arranged upon the basis of the first semester grades. Almost one-fourth of the men and slightly more than one-fourth of the women are found in the lowest group when arranged upon the basis of the psychological examination. However, when arranged upon the basis of the first semester grades the percentage of men in the lowest quarter of the class is almost seven times as great as the percentage of women.

The average number of quality points earned during the first semester by the women was 26.7 as compared to an average of 15.2 for the men. During the first semester, thirty-eight per cent of the men of the class, and only 6 per cent of the women of the class, earned fewer than 10 quality points. On the other hand 36 per cent of the women, and only nine per cent of the men of the class earned 30 or more quality points. A situation similar to this was found at all of the institutions for which data are available; in every instance the differences in the scores earned by young men and young women on the psychological tests are negligible, but the young women excel the young men in scholarship.

Figure 14 presents a comparison of the average number of quality points earned by men with the average number of quality points earned by women in the class for each of the four intelligence groups.

Figure 14 shows that women as a group excel men in quality points earned for every level of the psychological test. In fact

FIG. 14. AVERAGE NUMBER OF QUALITY POINTS EARNED FIRST SEMESTER BY MEN AND WOMEN IN EACH OF THE FOUR PSYCHOLOGICAL GROUPS OF THE FRESHMAN CLASS



the women of the lowest quartile on the psychological test earned better grades than the men of the highest quartile.

Various suggestions may be made as to the reasons for the sex differences shown herein. Certainly the fact that the two sexes, approximately equal in ability as shown by the psychological examination, differ markedly in scholarship,

calls for some explanation. The reasons given below probably are not complete, and would not all apply with equal force to any single institution, but are listed as suggestive.

1. The young men in the freshman class may not be applying themselves as assiduously as the young women are to their college work.

2. There may be some bias in the grading system that is particularly favorable to the young women.

3. Elements of personality, attitude, etc., not measured in the psychological examination may affect markedly the grades issued to individual students.

4. The freshman curriculum may be better suited to young women than to young men.

5. The college may be importing a group of young men noted for their athletic prowess, with the understanding that a satisfactory performance on the athletic field will be accepted in lieu of satisfactory scholarship. Data available indicate that those participating in athletics at some of the institutions included in this report fail in most instances to earn high grades.

2. *Value of Psychological Examinations as a Means of Predicting the Success of Students in College*

On the basis of the division furnished by the quarter groupings of the psychological tests, comparisons were made relating to number of quality points earned during the first semester, and number of students failing to earn quality points during the first semester. This information is presented in Table 33.

TABLE 33. RANKS ON A PSYCHOLOGICAL EXAMINATION, QUALITY POINTS EARNED FIRST SEMESTER IN COLLEGE, AND COLLEGE FAILURES

STUDENTS GROUPED WITH RESPECT TO RANK ON PSYCHOLOGICAL EXAMINATION		AVERAGE NUMBER OF QUALITY POINTS EARNED PER SEMESTER-HOUR (FIRST SEMESTER IN COLLEGE)	NUMBER EARNING ZERO QUALITY POINTS (FIRST SEMESTER IN COLLEGE)
Upper	25 per cent of class	1.81	0
Middle	50 per cent of class	1.28	2
Lower	25 per cent of class	.85	4

This table shows that the average number of quality points earned per semester-hour for the upper 25 per cent is more than twice as great as for the lower 25 per cent. A similar trend was noted on Fig. 14 in the preceding section. It is evident that the earnings of a group of students in quality points vary directly with the standing of the group in the psychological examination.

If those students who failed to earn any quality points during the first semester are considered as the failures of the class, two-thirds of these failures are found in the lower 25 per cent, one-third in the middle 50 per cent, and none in the upper 25 per cent.

An analysis of the data relating to the number of quality points earned by students and students' ranks on the psychological examination shows that approximately fifty per cent of the students classified in the upper quarter by the psychological tests are also in the upper quarter on the basis of grades received. However, the chances of the student classified in the lower quarter by the psychological test to be placed in the upper quarter on the basis of college grades are only 8 to 92.

The relationship between quality points earned during the first semester and rank on the intelligence test is best represented in terms of coefficients of correlation. Correlations were made by means of the Spearman Rank Method. The coefficients obtained are as follows:

(1) Psychological Test and First Semester College grades for both men and women-----rho	+ .39	± .06
(2) Psychological Test and First Semester College grades for women only-----rho	+ .52	± .09
(3) Psychological Test and First Semester College grades for men only-----rho	+ .42	± .07

The coefficient of correlation is a means of expressing the relationship which exists between two traits or abilities. Rugg, in his book, "Statistical Methods Applied to Education," makes the recommendation that a coefficient of less than .15 or .20 be regarded as negligible; a coefficient from .15 or .20 to .35 or .40 be regarded as "present, but low"; a coefficient ranging

from .35 or .40 to .50 or .60 be interpreted as "marked" relationship; and a coefficient above .60 be interpreted as a high relationship. On this basis the conclusion might be drawn that there is marked evidence that abilities represented by psychological tests and by first semester college grades accompany each other. Students above the average on the psychological test will *tend* to be above the average in their first semester grades.

The fact that higher coefficients of correlation are obtained for the men and women grouped separately than when they are combined seems to be due to the fact that sex is an important factor affecting scholastic work in the college under consideration.

3. *Comparative Intelligence of College Students*

The first preliminary report of the comparative psychological test program in which 109 colleges participated has been made available in the issue of the *Educational Record* for April, 1925. In this report norms for 25 colleges whose records had so far been tabulated, were presented.

One of the best ways of comparing scores on tests of this kind is by means of percentile rankings. The percentile rank of a student on a test shows the percentage of students who score lower than he does. Therefore, a percentile of 50 shows average performance. A percentile of 85, for example, would indicate that 85 per cent of the students make lower scores and that only 15 per cent make higher scores.

Table 34 shows the average score of the students of the college being studied on each of the nine parts of the test, the score being expressed in terms of its percentile rank among the scores obtained from more than 5,000 freshmen students in the 25 colleges upon which norms for the test were calculated.

An examination of the data presented in Table 34 shows that the range of the percentile ranks of the average scores obtained on the nine tests in this particular college is from 15 for the Arithmetic Test to 44 for the Estimating Test. This means that only 15 per cent of all the students tested in the 25 colleges obtained lower scores on the Arithmetic Test than the average score for this college, and only 44 per cent of all

TABLE 34. AVERAGE SCORE OF THE FRESHMAN STUDENTS OF A COLLEGE IN TERMS OF A PERCENTILE RANK AMONG THE SCORES IN 25 COLLEGES

TEST	PERCENTILE RANK OF AVERAGE SCORES OBTAINED IN	
	THIS COLLEGE	
Completion	27	
Arithmetic	15	
Artificial Language	37	
Proverbs	36	
Reading	33	
Opposites	32	
Grammar	42	
Estimating	44	
Reasoning	37	

students taking the Estimating Test in the 25 colleges obtained lower scores than the average score obtained by students in this college.

From the data presented in Table 34, it is apparent that the average ability of students in this college is considerably below that of students in other institutions for which comparable data are available. In other words this institution draws students of considerably less than average intellectual ability.

4. *Conclusions Relating to Psychological Examinations*

This section dealing with the results of psychological examinations is presented with the thought that the administration of these tests to freshman students has certain practical values for collegiate institutions. Four suggestions with respect to the practical application of psychological test results are made herewith.

(1) The spread of ability revealed by the tests suggests the division of the freshman class into sections on the basis of the test results. In subjects where several sections of the same course are provided for freshmen, assignment of individual students to sections can be made on the basis of ability, as shown on the psychological test in combination with a subject matter test covering specific ability in the subject. In a number of the institutions surveyed such ability grouping was being carried on, and the testimony of the faculty members of these institutions as to its benefits is well-nigh unanimous. Two ad-

ministrative cautions need to be observed when ability grouping is carried on: in the first place, only the extremes of good and poor students should be segregated into separate classes, leaving the "average" group to be assigned to their sections indiscriminately; in the second place, flexibility should be maintained in the sectional grouping, making it possible to transfer students from one section to another whenever the proven ability of the student seems to warrant the transfer.

(2) In other sections of this report the recommendation is made that some institutions need to limit their enrolment to a number that can be adequately cared for with the funds available. Since there is a fair degree of predictive relationship between test results and scholarship, it is recommended that psychological tests be used as one basis for selecting entering students in those institutions which cannot accept all applications made for matriculation.

(3) A comparison of the average ability of the students which a college is drawing in comparison with that of students generally over the country is illuminating. The college whose students average lower than those for other institutions needs to make some grave inquiry as to why the students of better ability do not select it as their alma mater. While some of these situations may be explained by the local constituency of a given school, or the vocational objective of its students, it may frequently happen that there is something within the college itself which will tend to cause the students of better than average ability to shun it. It appears probable that such matters as failure to meet standards of accreditation, low qualifications of faculty members, extreme emphasis on athletics, and inferior plant and equipment tend to repel the better students.

(4) A comparison of the ability of men and women, as shown by the psychological tests, and the subsequent study of the distribution of grades in the light of the comparative abilities of the two sexes, will prove enlightening in many institutions. One obvious outcome should be a careful scrutiny of the curriculum to see if it in any way appeals to young women better

than to young men, or if it is designed to meet the needs of one group more adequately than the other. Even the detailed content of courses needs to be carefully examined to discover if there is a basis there for a bias in the grading system.

Student Scholarship

At a number of institutions, investigations were made of the scholarship of the students holding membership with fraternities, clubs, and other campus organizations. Data have been selected for presentation in this report from one of the colleges which is most nearly representative of the group studied with respect to the scholarship of members of fraternities, sororities, and athletic groups.

The results are expressed in terms of "quality points," the derivation of which has been discussed in the preceding chapter. In the case of this particular college, each semester hour of work completed with a grade of A entitles the student to 3 quality points, a grade of B, 2 quality points, and a grade of C, 1 quality point. No points are given for grades below C. The average number of quality points earned by the students in a specific organization for the session, 1923-1924, was determined by dividing the total number of points earned in the organization by the number of members—a weight of one-half being given to those members in the organization for only one semester. This method was used in preference to the method of averaging the averages of the individual members. By the method used consideration is given to the student who takes a heavy course, and who (because of that fact) does not make as high grades as the student taking only a few semester hours of work.

The average number of quality points earned by the student body of 246 students was 40.91. The results obtained from a comparison of the men and women in the college will warrant careful consideration, due to the almost equal division of the student body with respect to sex. There were 116 men and 115 women students for the entire session. In addition to these, 20 men and 10 women were students for one semester

only. The average number of quality points earned by women was 47.72 as compared with 34.43 for the men, and 40.91 for both men and women.

The scholarship of each of the fraternity groups is revealed in Table 35.

TABLE 35. AVERAGE NUMBER OF QUALITY POINTS EARNED BY FRATERNITY MEMBERS

MEN	EXCLUSIVE OF PLEDGES NEVER INITIATED	INCLUDING PLEDGES NEVER INITIATED	AVERAGE OF FRATER- NITY MEMBERS ¹
Phi Kappa Tau	35.89	35.89	34.07
Pi Kappa Alpha	33.42	28.60	
Kappa Alpha	30.80	30.80	
WOMEN			
Alpha Delta Theta	73.11	66.00	56.48
Delta Delta Delta	60.66	60.66	
Sigma Sigma Omicron	48.46	48.46	
Chi Omega	46.19	46.19	

¹This is a weighted average; not an average of the averages in the first column.

TABLE 36. AVERAGE NUMBER OF QUALITY POINTS EARNED BY MEMBERS OF A NUMBER OF COLLEGE ORGANIZATIONS

Mermaid Club	74.12	
Y. W. C. A. Cabinet	64.58	
Masonic Club	62.46	
Forum	54.19	
Average of Women		47.72
Y. M. C. A. Cabinet	46.55	
Boar's Head	44.50	
Stagecrafters	43.08	
Women's Basket-ball Team	41.87	
Student Volunteer Band	41.02	
Average of all Men and Women		40.91
Glee Club	39.40	
Men's Basket-ball Team	38.87	
Athelney Literary Society	38.22	
Book and Bones	36.14	
Average of Men		34.43
Lampas	32.46	
Henry County Club	29.73	
Football Team	28.40	

Throughout Table 35 the women's fraternities are superior to the men's fraternities in scholarship, the general average

being 22.41 points higher. This fact raises certain questions. Is the course of study of this college particularly adapted to women? Have they greater ability than men, or do they merely make greater use of their opportunities, either because of greater interest or because of more favorable environmental conditions?

Table 36, dealing with student organizations and athletic groups, reveals great differences in the scholarship among these groups.

The average number of quality points earned by the athletes of the college, including both men and women, is 33.07. Definite conclusions regarding the effect of athletics upon scholarship cannot be drawn without information relative to the mental capacity of this group.

As a result of the study of student scholarship in this college, the following conclusions may be drawn:

(1) The average number of quality points earned by the women is 13.29 points higher than the average earned by the men.

(2) The average number of quality points earned by the women fraternity members is 22.41 points higher than the average earned by the men fraternity members.

(3) The average number of quality points earned by men fraternity members is approximately equal to that of men non-fraternity members; the average number of quality points earned by women fraternity members is 18.76 points higher than that of women non-fraternity members.

(4) The average number of quality points earned by all athletes is 8.0 lower than the average for the college; in quality points earned, the women's basket-ball team approximates the average for the college, the men's basket-ball team falls slightly below the average for the college, and the football team earned an average of only 28.40 quality points as compared with an average of 40.91 for all students in the college.

In general these conclusions are similar to those obtained from the other institutions included in this phase of the study.

The Working Load of Students

1. *Method of Study*

The data upon which this section is based were obtained from replies to a questionnaire submitted to the students of six institutions surveyed by the writers. In submitting the questionnaire the following statement was made:

"In this investigation there is no intention to check up the total time expenditure of the individual student. Our desire is merely to obtain some general averages and to set up standards for a student load. In the report of this study the information obtained from the individual student will be treated as strictly confidential; averages only will be mentioned.

"You are asked to list, by instructor, course name and number, each course for which you are enrolled and to report the approximate number of hours and minutes spent on the work of the course each week. Report each course under the headings given below. Estimate your time in terms of a typical week."

Following is the questionnaire filled out by the students:

<i>Underline Rank:</i>					
Freshman	Sophomore	Junior	Senior	Special	Graduate
INSTRUCTOR	SEM. HOURS CREDIT	COURSE	HOURS SPENT IN LEC., REC. OR QUIZ	HOURS SPENT IN LAB.	HOURS SPENT IN OUTSIDE PREPARATION

The materials obtained by means of this questionnaire are utilized in studying student load by classes, by instructors, and by departments.

2. *Student Working Load by Courses*

The results obtained when working loads of students are tabulated by specific courses are illustrated by data from

Transylvania College. Table 37 shows the average time expended by students per credit-hour earned for every course taught in Transylvania College during the first semester of 1924-1925.

TABLE 37. WEEKLY STUDENT LOAD PER CREDIT-HOUR FOR TRANSYLVANIA COLLEGE, BY COURSES

COURSE NUMBER	NUMBER OF HOURS OF WORK REQUIRED WEEKLY PER CREDIT-HOUR ¹				NUMBER OF STUDENTS REPORTING
	ARITHMETIC				
	MEAN	Q ₂	Q ₁	Q	
Chemistry 111	1.50	2.05	1.10	.47	6
Education 435	1.82	2.05	1.61	.22	13
French 180	1.88	1.85	1.55	.15	43
Education 438	1.94	2.25	1.63	.31	15
Education 231	1.98	2.18	1.63	.27	44
Physical Training	2.00	2.00	2.00	.00	20
Sociology	2.00	2.27	1.80	.23	12
French C	2.07	2.50	1.50	.50	6
Biology 333	2.07	2.40	1.40	.50	12
English 331	2.08	2.30	1.76	.27	10
English 233	2.09	2.30	1.75	.27	24
Biology 141	2.09	2.34	1.77	.28	56
Chemistry 541	2.10	2.50	1.70	.40	2
Philosophy 400	2.10	2.30	1.70	.30	6
English 260	2.12	2.23	1.90	.15	22
Spanish 260	2.16	2.33	2.09	.12	7
Philosophy 260	2.16	2.21	2.03	.09	31
Physics 181	2.17	2.25	1.73	.26	9
Biology 341	2.18	2.37	1.64	.37	5
Greek 180	2.20	2.33	2.07	.13	12
Greek 331	2.23	2.40	2.03	.18	16
Philosophy 331	2.23	2.38	2.06	.16	18
French 331	2.25	2.65	2.03	.31	23
Physics 141	2.27	2.60	2.10	.25	12
Home Economics	2.29	2.30	2.03	.13	24
French 231	2.30	2.50	2.06	.22	42
English 333	2.30	2.75	1.70	.52	6
Chemistry 241	2.30	3.07	1.70	.18	6
Biblical Literature	2.35	2.72	2.04	.34	64
Spanish 160	2.39	2.76	2.08	.34	11
Chemistry 180 A.B.C.	2.41	2.70	1.80	.45	47
Biology 220	2.43	3.05	2.07	.48	6
Chemistry 341	2.44	2.45	2.15	.15	7

¹See footnote at end of table.

TABLE 37—CONTINUED

COURSE NUMBER	NUMBER OF HOURS OF WORK REQUIRED WEEKLY PER CREDIT-HOUR ¹				NUMBER OF STUDENTS REPORTING
	ARITHMETIC				
	MEAN	Q ₃	Q ₁	Q	
English X	2.45	3.10	1.60	.75	4
French 431	2.47	2.70	1.36	.67	7
German 260	2.55	2.80	2.20	.30	4
German 180	2.57	3.05	2.15	.45	3
Mathematics 141	2.53	3.05	2.25	.40	36
Expression 220	2.68	2.20	2.04	.08	8
English 160	2.76	3.12	2.37	.27	87
Greek 260	2.82	3.15	2.16	.49	10
Expression 120	2.83	3.18	1.76	.71	52
Education 131	2.86	3.16	2.58	.29	78
Latin 143	2.90	3.18	2.65	.26	5
History 363	2.90	3.29	2.61	.32	17
English 363	2.90	3.16	2.33	.41	12
History 260	3.00	3.24	2.70	.27	35
Mathematics 241	3.05	3.20	2.60	.30	4
History 460	3.10	3.69	2.71	.49	18
Latin 231	3.13	3.20	2.73	.23	16
Latin 511	3.19	3.75	2.45	.65	13
Latin 141	3.26	3.55	3.08	.23	6
Education 335	3.38	4.06	3.01	.52	21
Expression 320	4.00	4.00	4.00	.00	2
Education 531	5.35	6.20	2.20	2.00	4
Weighted Average	2.47	3.02	2.05	.48	944

¹This includes time spent in scheduled class and laboratory sections as well as time spent in preparation. The arithmetic mean, commonly known as the "average," may be defined as the sum of a series of items divided by their number. When it becomes desirable to mark off on a scale the position of the middle half of the measures, the quartile deviation (Q) is employed. It locates roughly, one-fourth of the frequencies in each direction from the median; the median may be defined as that point on the scale of frequency distribution at or above which and at or below which lie an equal number of individual measures.

Q_1 and Q_3 represent quartile points on the scale and may be defined as those points above and below which one-fourth or three-fourths of the measures fall.

An examination of the data presented in Table 37 shows that the arithmetic means (or averages) of hours of work required weekly for each credit-hour earned in Transylvania College, by courses, ranges from 1.50 to 5.25 with a weighted average of 2.47. The weighted average for Q_3 is 3.02 and the weighted average for Q_1 is 2.05. This means that in the case

of one-fourth of the total number of student-credit-hours for which students are registered in Transylvania College, the number of hours of work required for each credit-hour exceeds 3.02, while for another fourth of the total number of student-credit-hours for which students are registered, the number of hours of work required weekly for each credit-hour is less than 2.05.

3. *Student Working Loads by Instructors*

The results obtained when working loads of students are tabulated by instructors are illustrated by data from Bethany College, and by summaries of averages for six institutions.

TABLE 38. AVERAGE NUMBER OF HOURS STUDENTS SPEND PER CREDIT-HOUR PER WEEK IN STUDY, RECITATION, QUIZ AND LABORATORY WORK, BY INSTRUCTORS, AT BETHANY COLLEGE

INSTRUCTOR NUMBER	NUMBER OF STUDENTS REPORTING	AVERAGE HOURS PER CREDIT- HOUR PER WEEK
1	9	3.22
2	12	3.18
3	18	3.15
4	49	3.01
5	51	3.00
6	25	2.95
7	67	2.89
8	10	2.83
9	82	2.74
10	43	2.73
11	41	2.73
12	77	2.67
13	32	2.66
14	53	2.64
15	9	2.60
16	33	2.59
17	73	2.57
18	65	2.56
19	9	2.55
20	38	2.54
21	8	2.54
22	66	2.53
23	69	2.38
24	9	2.38
25	104	2.27
26	5	2.20
Average for the College		2.65

The student load per credit-hour by instructors for Bethany College during the second semester of 1925-1926 is presented in Table 38.

Upon examination of Table 38 it will be observed that the average number of hours of work required weekly per credit-hour by instructors ranges from 3.22 for Instructor Number 1 to 2.20 for Instructor Number 26.

Table 39 shows for six institutions the student load per credit-hour for the median instructor, for the instructor requiring the most time, and for the instructor requiring the least time.

TABLE 39. STUDENT LOAD PER CREDIT-HOUR BY INSTRUCTORS AT SIX INSTITUTIONS

INSTITUTION	HOURS STUDENTS WORK WEEKLY PER CREDIT-HOUR		
	FOR THE	FOR INSTRUCTOR	FOR INSTRUCTOR
	MEDIAN INSTRUCTOR	OBTAINING THE MOST TIME	OBTAINING THE LEAST TIME
Hiram	2.9	3.4	2.3
Phillips	2.7	4.1	1.9
Bethany	2.7	3.2	2.2
The College of the Bible	2.5	2.8	2.2
Christian	2.3	3.1	1.4
Transylvania	2.3	3.1	2.0

An examination of Table 39 shows considerable variation among the institutions with respect to the load required of students. The heaviest load required by any instructor at The College of the Bible is lighter than the load reported for the median instructor at Hiram College. The instructor for whom the least work is reported at Hiram College obtains as much time per credit-hour from his students as the median instructor obtains at either Transylvania College or Christian College.

4. *Student Working Load by Departments*

Results obtained when student working loads are tabulated by departments are illustrated by data from three institutions.

The data presented in this table are not adequate to warrant generalizations concerning the amount of time students spend upon the subjects of the several departments, since only three

TABLE 40. AVERAGE STUDENT LOAD PER CREDIT-HOUR BY DEPARTMENTS AT THREE INSTITUTIONS

DEPARTMENT	HOURS STUDENTS WORK FOR EACH CREDIT-HOUR CARRIED AT			
	THREE INSTITUTIONS'			TRANSYLVANIA
	AVERAGE	PHILLIPS	HIRAM	
Mathematics	3.2	4.1	2.8	2.6
History	3.0	2.5	3.1	3.3
Political Science	2.8	2.5	2.8	3.0
Ancient Languages	2.8	2.6	2.8	3.0
Biblical Literature	2.7	2.9	2.7	2.5
Modern Language	2.7	2.8	3.1	2.2
Physics	2.7	3.0	3.0	2.2
Education	2.7	2.7	3.0	2.6
Expression	2.7	2.6	2.6	2.9
Theology and Church History	2.7	2.7	3.1	2.3
Biology	2.6	2.9	2.9	2.1
Economics and Sociology	2.6	2.8	2.8	2.3
Psychology	2.6	2.8	2.7	2.2
English	2.5	1.9	3.1	2.5
Religious Education	2.5	1.9	2.9	2.7
Philosophy	2.4	2.5	2.5	2.3
Chemistry	2.4	2.4	3.4	2.3

institutions are represented in the table. Furthermore the variation in the work required for the various courses within many of the departments is much greater than the variation in the averages for the several subjects. In terms of departmental averages, mathematics and chemistry represent the two extremes. The number of hours students work for each credit-hour carried in chemistry is only one-fourth less than the number of hours students work for each credit-hour carried in mathematics, yet within both the mathematics and the chemistry departments, the variation among the three institutions is much greater than that between the averages of the two departments. It appears probable that averages for departments, computed from data of a larger number of institutions, would be much more nearly equal than those shown for the three institutions, and that the averages for the several departments would not be appreciably different, one from another. In

other words, the problem seems to be one of variation in standards within and among institutions, rather than one of variations in intrinsic difficulty of a particular field of subject matter.

5. Student Working Loads by Classes

The results obtained when student working loads are tabulated separately for freshmen, sophomores, juniors, and seniors are illustrated by data from five institutions. Table 41 shows the average number of hours students spend per week in study, recitation, quiz, and laboratory work, combined, by classes and institutions.

TABLE 41. AVERAGE NUMBER OF HOURS STUDENTS SPEND PER WEEK IN STUDY, RECITATION, QUIZ, AND LABORATORY WORK, COMBINED, BY CLASSES AND INSTITUTIONS

CLASS	BETHANY COLLEGE	PHILLIPS UNIVERSITY	HIRAM COLLEGE	TRANSYLVANIA COLLEGE	CHRISTIAN COLLEGE	WILLIAM WOODS COLLEGE
Freshman	40	43	44	35	36	35
Sophomore	42	44	46	37	38	37
Junior	42	44	45	37		
Senior	41	49	45	40		
Average for Institution	41	44	45	37	37	36

Table 41 shows that the amount of time students spend upon their studies varies greatly among the institutions represented. At Hiram College the average number of hours reported is 25 per cent greater than the average reported for William Woods College. It appears, also, that upper classmen tend to spend more hours each week than do members of the lower classes.

Causes of Student Withdrawals

Data presented in the previous section of this chapter indicate that student withdrawal in a number of the colleges surveyed is greater than is desirable in standard four-year insti-

tutions. As a means of obtaining information relating to this problem, and of discovering the primary causes of the high rate of withdrawals, a letter was sent to a number of former students of one of the smaller four-year colleges. The letter, which was sent to former students who had not returned to complete their college courses, requested the reason why they had not returned to the institution. Of those replying to this letter, twenty stated that they left the institution because the college offered no opportunity to specialize, eighteen left because of insufficient funds, seven because the college was too small, six to attend an institution nearer home, five to get married, five because the faculty was not satisfactory, and eight left for miscellaneous reasons. The lack of an opportunity to specialize appears to be responsible for more of the students who replied leaving this institution without completing their courses than any other single cause. Of the twenty students leaving the college because of the lack of an opportunity to specialize, nine left because they could not enroll for enough work in the field of their major interest, four left to study medicine, three left to study engineering, two left to study law, and two left to study agriculture.

The writers believe that small private colleges should not attempt to retain through the senior year many of those students who leave because of a desire to specialize before completing a four-year course. However, if those students preparing for certain types of professional work such as law or medicine were permitted to graduate from the institution after taking the work of their senior year elsewhere in a professional school, it appears probable that a smaller number would transfer to professional schools at the end of their sophomore year.

Summary

Several of the colleges have been experimenting with the use of psychological examinations in the freshman classes. Interesting comparisons are thus made possible showing the effect of intelligence upon scholastic ability. A study of the correlation between psychological test scores and grades re-

ceived shows that the students of better ability tend to have the best scholarship records, but the relationship is not sufficiently close to justify the use of the psychological examination as a prediction of future scholastic ability. Interesting comparisons are also possible regarding the general ability of students attending different institutions, where the same tests have been given in the different colleges. The experimental work being carried on in connection with psychological tests has promise of bearing much fruit in improved administration of the student personnel.

Studies have also been made of the scholarship of various student groups, such as members of fraternities, sororities, and clubs. Athletes, as a group, usually rank lower than the average in scholarship.

Data relating to the working loads of students have been given careful study. There is apparent a wide variation in the preparation time required for an hour of recitation in the various courses, some courses requiring several times as much time for preparation as other courses. Similar variations are found to exist when the data regarding working loads of students are tabulated by instructors and by departments. These data indicate that there has been no generally understood and generally followed practice regarding uniform working loads for various courses, instructors, and departments. Similar variations are found even among the various institutions. Upper classmen tend to spend more hours each week on their studies than do members of the lower classes.

An investigation of causes of student withdrawal shows that the principal reason for such withdrawal is the lack of an opportunity to specialize. If those students preparing for certain types of professional work, such as medicine or law, were permitted to graduate from the institution after taking the work of their senior year elsewhere in a professional school, it appears probable that a smaller number would transfer to professional schools at the end of their sophomore year.

CHAPTER VIII

THE INSTRUCTIONAL LOAD

The Measurement of Service Load

One of the most difficult problems confronting a college administration is that of equalizing the loads of the members of the teaching staff. The factors which enter into the situation are so many and so varied that it is impossible for any purely mechanical method of measurement to give results that are anything more than approximately correct. No thoroughly scientific method for the measurement of teaching load is now available. The methods employed in this report are admittedly defective and subject to improvement. Yet, in order to adjust the loads of the members of the faculty in a manner as nearly as possible fair and equitable some method or methods of measurement must be employed.

There are two points of view from which the measurement of the actual working loads of faculty members in terms of time expended may be approached. First, it may be desirable to measure the time which the members of a particular college faculty actually spend in the performance of their several duties; second, it may be desirable to measure the loads of these faculty members for a particular part of their duties, such as meeting classes, in the thought that this is an index of the amount of total service time. In the use of the second method no attempt is made to measure the total time actually expended by the members of a particular faculty; the attempt is to measure the average amount of time it would take an instructor, working under average conditions, to perform tasks of similar nature.

There are certain distinct advantages to be derived by a college or university administration from the measurement of the working loads of the members of a teaching staff in terms of actual amounts of time expended by each instructor. How-

ever, this method of measurement also has its limitations. For example, each instructor knows that his future load may be affected by his report; consequently, in some instances the reports may not be as accurate as would be desired. Furthermore, it often happens that one instructor may spend double the amount of time expended by another instructor in performing a task of equal difficulty. The instructor who works many hours in the performance of his duties may or may not be of more value to the institution than the instructor who works but a few hours. The former instructor may be doing more efficient work as a result of the extra time which he spends in the performance of his instructional duties, or he may be spending a large amount of time merely because he is inefficient or poorly prepared, or, possibly, because he is relatively dull mentally. Therefore, in studying faculty load, these limitations to the direct questionnaire method of obtaining information from the individual members of a teaching staff must not be overlooked.

The second method of measurement, that of applying some objective standard to a particular situation, has been employed much more frequently than the method described above. Standardizing agencies and survey staffs have confined their measurements of teaching loads very largely to such objective standards. Regional accrediting associations such as the North Central Association of Colleges and Secondary Schools and the Association of Colleges and Secondary Schools of the Southern States have suggested that the maximum teaching load of a college instructor should not be greater than sixteen semester hours. Clearly, there are limitations to the use which may be made of measurements of this type. All students of educational administration realize that the size of classes and the nature of the work play so large a part in determining the difficulty of actual performance that some standard of measurement more accurate than the teaching hour is essential.

An attempt has been made by survey commissions working under the direction of the United States Bureau of Education to develop a standard somewhat more scientific than the teach-

ing-hour standard. In the Iowa survey¹ made in 1916 an analysis is made of some of the factors determining teaching load. In this report also a standard is set up for the measurement of load. The statement is made "that in a lecture a professor may meet as many as may profitably hear and see him; in a recitation or quiz the desirable maximum would be twenty or twenty-five students in a class, and in no case should the number exceed thirty; in laboratory work it is commonly agreed that one instructor should be provided for every fifteen or sixteen students." The report goes on to state that "the number of lecture, laboratory and quiz sections which one instructor can meet in a week will depend upon the character of the work, whether it is elementary or advanced, whether it involves reading a large or small number of written reports, and whether it consists entirely of separate courses or includes two, three, or four sections of the same course. It will also depend upon the amount of outside reading which the instructor is expected to do as well as upon his administrative and committee work."

In actual practice some college administrators take into consideration in the measurement of teaching load only one factor—teaching hours. Possibly this is due to the fact that this index is the only one which has received much consideration by accrediting agencies in the past. Service loads of staff members cannot be measured in terms of teaching hours alone. The time required in caring for a class of forty students may differ greatly from that required in caring for a class of fifteen or twenty. The teaching load includes all work of an instructional character, including the time spent in recitation, in lecture, in laboratory, in preparation for class sessions, in reading papers, in student conferences relating to class work, and in other work connected with class sessions. As subsequently employed in this study the teaching load does not include committee work, administrative functions or other official duties not connected directly with the work of classes.

The results obtained from a questionnaire submitted to the

¹United States Bureau of Education, Bulletin, 1916, No. 19.

members of the teaching staffs of a number of the institutions surveyed indicate that the most important determinants of the teaching load are:

- (a) The department or subject taught
- (b) The personality of the class
- (c) Previous experience or inexperience with the work of the course
- (d) Repetition of courses in concurrent sections
- (e) Elementary or advanced character of the work
- (f) The number of classes taught weekly
- (g) The size of the class
- (h) The mode of presentation, e.g., recitation, lecture, laboratory, etc.
- (i) Alternation of courses from year to year

Of the factors mentioned above as determining teaching load, those considered by faculty members as being the most important are those listed as (d), (f), (g), and (h). Of the nine factors mentioned above, these four are the only ones considered in this report.

The Size of Classes

Table 42 shows data relating to the size of classes in three colleges.

Table 42 is read as follows: At Transylvania, there is one class enrolling more than 100 students, one class enrolling between 60 and 74 students, five classes enrolling between 40 and 49 students, etc. This table shows that of the sixty-one classes taught at Transylvania College, thirteen have enrolments of thirty or more students each, while seventeen have enrolments of fewer than ten students each, and three have enrolments of fewer than five students each.

The median class at Transylvania has an enrolment of 19 students. The arithmetic mean of class enrolments is 22. At Hiram, the median class enrolls 15 students and the arithmetic mean is 18. At Culver-Stockton the median class enrolls 9 students and the arithmetic mean is 12.

TABLE 42. NUMBER OF CLASSES BY SIZES AT THREE INSTITUTIONS

NUMBER OF STUDENTS IN CLASS	NUMBER OF CLASSES OF EACH SIZE AT THREE INSTITUTIONS		
	TRANSYLVANIA	HIRAM	CULVER-STOCKTON
More than 100	1		
75 - 100	0		
60 - 74	1		
50 - 59	0	4	
40 - 49	5	5	
30 - 39	6	6	10
20 - 29	17	17	12
15 - 19	7	22	8
10 - 14	7	25	13
5 - 9	14	12	19
4	2	4	7
3	1	1	7
2		3	9
1		2	8
Total Number of Classes	61	101	93
Median ¹ Number of Students per Class	19	15	9

¹Calculated from an ungrouped distribution.

In an undergraduate college with a curriculum constructed scientifically to meet the needs of the institution, an average class enrolment of from twenty to twenty-two students does not appear to be excessive. Classes of five students or less can rarely be justified except in advanced work. Courses enrolling ten students or less are expensive and should not be given except in cases where the need can be fully demonstrated. In the report of "State Higher Educational Institutions of Iowa,"¹ the following statement relative to the size of classes is made:

"Many small classes indicate in some cases the lack of adequate study of the curriculum or schedule by the administrative officers, and in others an undue effort by departments to serve the whims or the convenience of students in order to build up departmental enrolment. Large classes, on the other hand, unless they are lecture classes, usually entail inferior educational results. Classes of over thirty are at least open to question. Any considerable number of them generally shows a need for more instructors, or a poor distribution of students or instructors."

¹Op. Cit.

A number of investigations made recently relative to the size of classes seem to indicate that some subjects can be taught as effectively in large classes as in classes of limited enrolment. Furthermore, it appears that relatively large classes can sometimes be taught effectively by methods other than the lecture method, although regional standardizing association standards still continue to recommend classes not to exceed thirty students for all but lecture groups.

From the data presented in Table 43 interesting comparisons may be made of twelve institutions with respect to the distribution of size of classes.

TABLE 43. SIZE OF CLASSES AT TWELVE INSTITUTIONS

INSTITUTION	CLASSES HAVING NOT MORE THAN FIVE STUDENTS		CLASSES HAVING MORE THAN THIR- TY STUDENTS		AVERAGE NUMBER STUDENTS PER CLASS	MEDIAN NUMBER STUDENTS PER CLASS	YEAR
	NO.	%	NO.	%			
Spokane University	26	48.2	0	0.0	7.9	6	1926-27
Culver-Stockton College	33	35.5	8	8.6	12.0	9	1924-25
Bethany College	36	29.8	12	9.9	13.0	9	1925-26
Randolph College	7	25.9	3	11.1	13.8	10	1926-27
Atlantic Christian College	11	24.4	3	6.7	12.0	10	1925-26
Eureka College	18	15.8	30	26.4	15.6	10	1924-25
Lynchburg College	11	15.5	4	8.6	14.5	13	1924-25
Hiram College	14	13.9	12	11.9	17.9	15	1924-25
Phillips University	18	12.6	35	24.5	20.0	18	1925-26
Transylvania College	6	9.8	12	19.7	22.0	19	1924-25
William Woods College	1	2.7	9	24.3	22.2	16	1925-26
Christian College	1	2.0	3	6.0	22.6	21	1925-26
Average	14.9	16.2	12.8	14.4	17.3	14.1	

An analysis of Table 43 shows that the range in the per cents of classes having not more than five students enrolled is from 48.2 at Spokane University to 2.0 at Christian College. The range in the per cents of classes having more than 30 students enrolled is from 0 at Spokane University to 26.4 at Eureka College. The average number of students per class ranges from 7.9 at Spokane University to 22.6 at Christian College, while the median number of students per class ranges from

6 at Spokane University to 21 at Christian College. In interpreting these data it should be kept in mind that both William Woods and Christian are junior colleges, and consequently would be expected to have larger average classes.

The Student-Clock-Hour

In the Iowa survey¹ the "student-clock-hour" has been taken as the unit of measurement. This term is defined thus: One student under instruction in lecture, quiz or laboratory for at least 50 minutes net represents one student-clock-hour. The student-clock-hour does not discount laboratory hours, but counts laboratory, lecture and quiz exercises equally, hour for hour. A student in chemistry one hour in lecture, one hour in quiz and four hours in laboratory in a week would be counted as receiving six student-clock-hours of instruction.

Table 44 presents data regarding average student-clock-hour load for five denominational colleges and for twelve publicly supported colleges and universities. Data for publicly supported institutions have been taken from surveys made by the Bureau of Education and by the writers.

TABLE 44. AVERAGE NUMBER OF STUDENT-CLOCK-HOURS PER FACULTY MEMBER IN FIVE DISCIPLES INSTITUTIONS AND IN TWELVE PUBLICLY SUPPORTED INSTITUTIONS

INSTITUTION	AVERAGE STUDENT-CLOCK-HOUR LOAD	YEAR OF SURVEY
Phillips University	440	1923-24
Transylvania College	342	1924-25
Cotner College	260	1923-24
Randolph College	209	1926-27
California Christian College	198	1926-27
University of Kentucky	464	1923-24
Indiana State Normal School	424	1925-26
Ball Teachers College	410	1925-26
Purdue University	344	1925-26
University of Washington	333	1914-15
Indiana University	333	1925-26
University of Arizona	330	1921-22
Iowa State College	314	1914-15
University of Iowa	252	1914-15
University of Nevada	220	1915-16
Washington State College	214	1914-15
University of Hawaii	202	1919-20

¹Op. Cit.

The elective system makes it difficult to obtain any great degree of uniformity in the teaching load, as indicated by the student-hour. For purposes of comparison, however, it is a rather satisfactory measure of average load for a group of departments or for a college. The investigations which the Bureau of Education has made of various institutions throughout the country has led it to make the following suggestion:¹

“In a distinctly undergraduate college, where research work is limited and where little or no graduate work is conducted, a departmental average of 300 student-clock-hours per instructor may perhaps be taken as the reasonable norm. It must be noted also that in an institution whose program is made up largely of laboratory work, the average number of student-clock-hours per instructor will be higher than in an institution whose program consists chiefly of non-laboratory courses.”

It should be noted that the quotation above refers to student-clock-hours instead of student-hours.

It is difficult to estimate the time expended by student assistants in the several departments, or the effect of the employment of assistants upon the teaching load of instructors. From the viewpoint of the college administrator, the relationship between the instructor's salary and the amount of money expended for assistants is important. This relationship may be shown best in terms of the percentage of the instructor's salary which is paid to the student assistants.

Due to the fact that so many factors other than student-hours affect the teaching load, college administrators are agreed that no definite number of student-hours can be fixed for each instructor. However, an average for an institution, or even for a department or group of departments within an institution may be set up. For purposes of comparison among departments in a large university, or among groups of departments in a small college, the student-hour is a very desirable unit of measurement. In Table 45 a comparison of this type is made for a number of the departments and groups of departments in Transylvania College. It will be noted that the average loads of the faculty members in departments and groups of departments, stated in terms of student-hours, range from

¹Op. Cit., p. 119.

219 in Foreign Languages to 438 in Education. The number of student-hours per instructor in Foreign Languages is exactly half that in the department of Education.

TABLE 45. AVERAGE NUMBER OF STUDENT-HOURS PER INSTRUCTOR BY DEPARTMENTS AND GROUPS OF DEPARTMENTS

DEPARTMENT OR GROUP OF DEPARTMENTS	TOTAL NUMBER OF STUDENT- HOURS	NUMBER OF PROFESSORS	AVERAGE NUMBER OF STUDENT-HOURS
Education	780	1-4/5	438
Science and Mathematics	1551	4	388
History	314	1	314
English	662	2-11/30	279
Foreign Languages	843	3-5/6	219

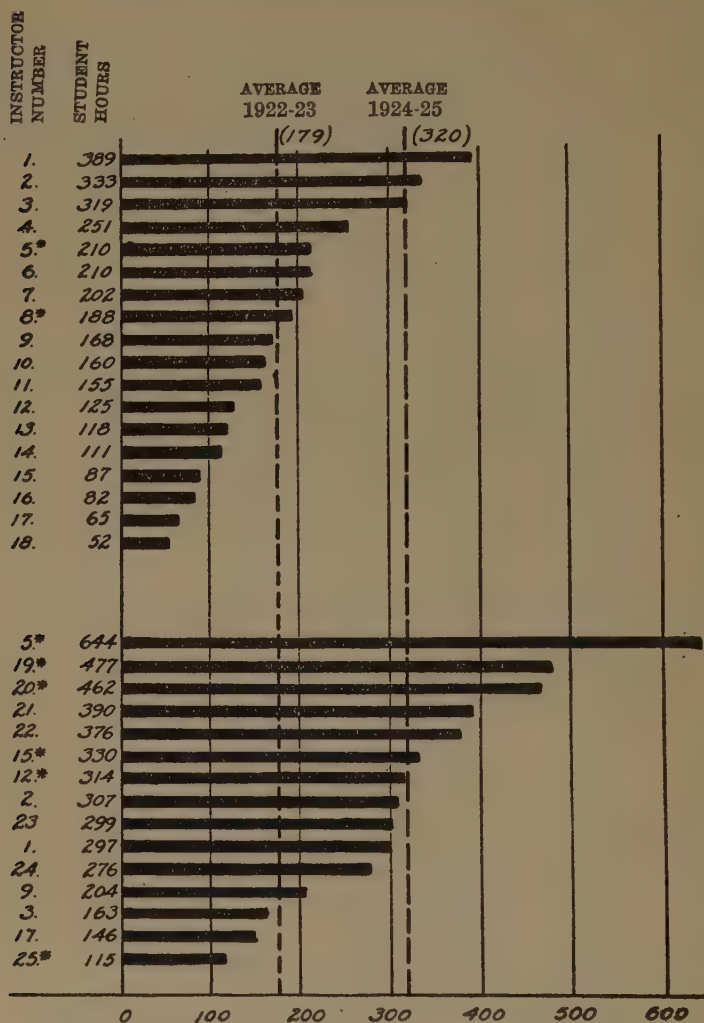
In Figure 15 is shown the average number of student-hours per semester for each faculty member of Transylvania College for the school years 1922-23 and 1924-25.

Figure 15 makes evident the changes which have occurred in the teaching loads of the various members of the faculty during a period of two years. The average load for 1924-1925 is almost double that for 1922-1923. The median load for 1922-1923 lies between 160 and 168 student-hours as compared with a median of 307 student-hours for 1923-1924. The arithmetic mean for 1922-1923 is 176 student-hours, as compared with 342 for 1924-1925.

The Teaching-Hour

The limitations of the student-hour as a unit for the measurement of teaching load have already been discussed. The student-hour has considerable value when employed to measure the average teaching loads of departments; it has even greater value as a unit for the measurement of the average teaching loads of groups of departments or of colleges. However, for reasons previously stated, the measurement of the loads of individual faculty members upon the basis of the student-hour may be very misleading. It fails entirely to recognize many important factors which determine the teaching load for the individual instructor.

FIG. 15. TEACHING LOADS OF FULL-TIME FACULTY MEMBERS FOR THE YEARS 1922-23 AND 1924-25 AT TRANSYLVANIA COLLEGE



*The student hours given represent the combined teaching loads of the instructor and the student helpers who serve as readers and laboratory assistants.

One of the most common units employed by accrediting agencies for the measurement of teaching load is the "teaching-hour." As used in this study, the teaching-hour represents one hour of lecture or discussion, or one and one-half hours of instruction in the laboratory or in scheduled quiz sections.

The North Central Association of Colleges and Secondary Schools has set the standard of 16 semester hours a week as a maximum teaching load. However, the North Central Association counts two hours of laboratory as the equivalent of one hour of lecture in calculating the teaching-hours. The committee on college standards from the chief accrediting agencies of the country suggests the following standards:

"The size of the faculty should bear a definite relation to the type of institution, the number of students and the number of courses offered. For a college of approximately 100 students in a single curriculum the faculty should consist of at least eight heads of departments devoting full time to college work. With the growth of the student body the number of full-time teachers should be correspondingly increased. The development of varied curricula should involve the addition of further heads of departments. . . . Teaching schedules exceeding 16 hours per week per instructor, or classes (exclusive of lectures) of more than 30 students, should be interpreted as endangering educational efficiency."

The teaching-hour as a measure of instructional load seems to find its principal usefulness in fixing maximum standards, as indicated in the standard of the North Central Association quoted above. For example, at Transylvania College, it was noted that six instructors exceeded the maximum teaching load of 16 hours. This was deemed a situation calling for remedy at as early a date as possible. Use of the teaching-hour for any purpose other than an indication of maximum desirable load is open to serious question.

The Preparation-Hour

In the measurement of teaching load, the effect of the repetition of courses in concurrent sections has seldom received the recognition which it deserves. As a rule, the preparation required to teach one class in two or three sections is much less than that required to teach single sections of two or

three different classes. Neither the student-hour nor teaching-hour gives recognition to this point. Consequently, the "preparation-hour" is employed to show the difference in teaching load which results from the repetition of courses in concurrent sections.

The preparation-hour may be defined as one hour of classroom instruction for which the instructor must prepare. Preparation for two sections of the same class constitutes a single preparation. As in the case of both the student-hour and the teaching-hour, one and one-half hours of instruction in the laboratory or in scheduled quiz sections are considered as equivalent to one hour of lecture or class discussion.

As in the case of the teaching-hour, the preparation-hour must be used cautiously, and in combination with other measures, if a true index of the actual load of any individual faculty member is desired. One situation, which must be interpreted cautiously when the preparation-hour is used as a measure of load, occurs when an instructor is assigned duplicate sections, the make-up of which is different. For example, suppose the instructor be assigned two sections of freshman English composition, one of the sections being composed wholly of students who are deficient in this subject while the other is composed of a superior group of students. In such case it is perhaps unfair to allow no extra preparation-hours for the second section of the same subject, since the instructor's task is manifestly different than it would be if both sections were approximately equal in ability.

The average number of preparation-hours per instructor does, however, take on some significance. Table 46, which follows, recapitulates the faculty loads of twelve institutions, in terms of average number of student-hours per instructor, average number of teaching-hours per instructor, and average number of preparation-hours per instructor.

A Weighted Measure of Teaching Load

Most of the efforts which heretofore have been made to ascertain how much time college work requires of the teaching staff have been crude and open to much valid criticism. Yet

TABLE 46. AVERAGE NUMBER OF STUDENT-HOURS,¹ TEACHING-HOURS,² AND PREPARATION-HOURS³ FOR FULL-TIME INSTRUCTORS IN TWELVE COLLEGES

INSTITUTION	AVERAGE NUMBER STUDENT- HOURS	AVERAGE NUMBER TEACHING- HOURS	AVERAGE NUMBER PREPARA- TION- HOURS	YEAR
Phillips University	363	15.8	14.0	1925-26
Transylvania College	320	14.8	12.4	1924-25
William Woods College	316	18.0	14.0	1925-26
Christian College	292	17.0	11.3	1925-26
Hiram College	275	15.4	13.3	1924-25
Eureka College	269	17.0	16.7	1924-25
Lynchburg College	223	16.0	14.9	1924-25
Bethany College	219	15.0	13.4	1925-26
Atlantic Christian College	204	13.5	13.5	1925-26
Culver-Stockton College	203	18.0	17.0	1924-25
California Christian College	198	12.0	12.0	1926-27
Randolph College	197	15.2	15.0	1926-27
Average	261	15.5	13.5	

¹A student-hour is defined as one student under instruction in lecture, recitation, or quiz for one hour (50 minutes net) each week, or in laboratory one and one-half hours; thus 20 students under instruction for a three-hour lecture course each week would represent 60 student-hours.

²In computing teaching-hours, one and one-half hours of laboratory work are considered equivalent to one hour of lecture or recitation.

³A preparation-hour is defined as one hour of classroom instruction for which the instructor must prepare. Thus an English instructor who teaches fifteen hours of freshman English in five sections would have only three preparation-hours, since the preparation necessary for teaching all the sections is the same; however, a teacher having only one section of each course will have the same number of preparation-hours as teaching-hours.

there are few aspects of academic work where investigations are more necessary. Perhaps the responsibility should rest on the faculties themselves to keep records of their work in such a way that misrepresentation regarding assignment of load will be impossible. Until a thoroughly scientific investigation has been made and satisfactory standards developed, a method of measuring teaching load somewhat arbitrary in its character must be employed.

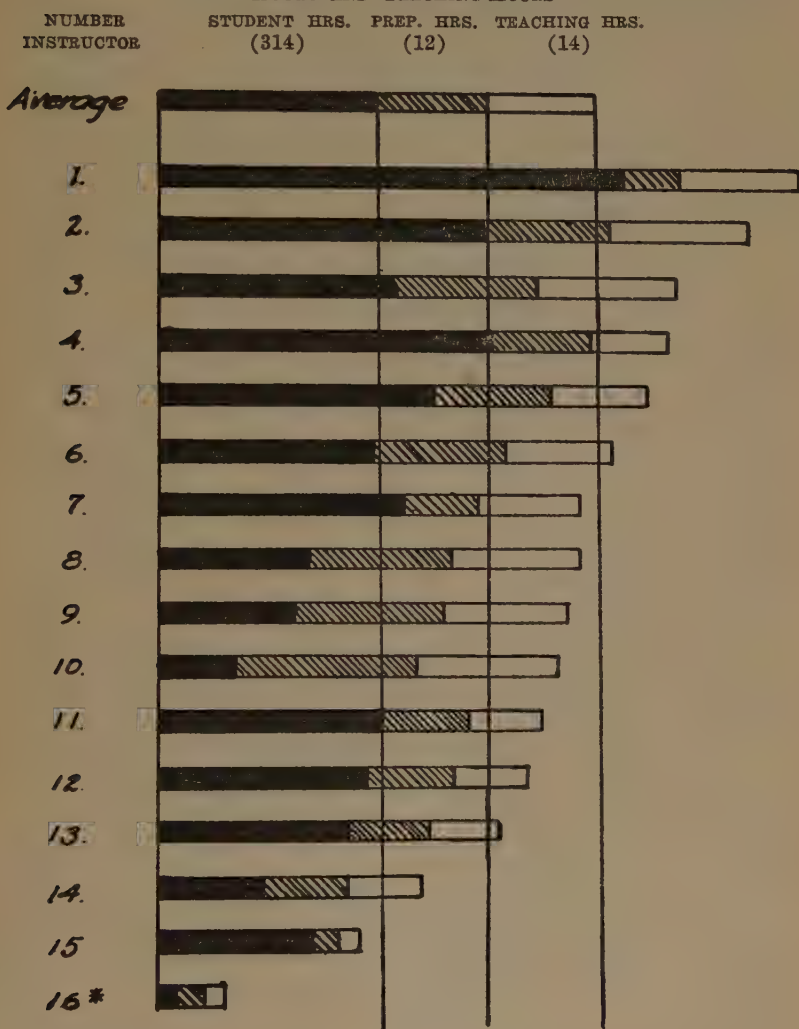
An analysis of data obtained in several of the surveys leads to the conclusion that the teaching load cannot be measured adequately for the individual instructor by any one of the three units of measurement already discussed; namely the student-hour, the teaching-hour, or the preparation-hour. In one institution, the full-time instructor having the largest number of both student-hours and teaching-hours has next to the

smallest number of preparation-hours, while the instructor having the smallest number of student-hours exceeds the 16-hour standard for teaching-hour load, and has the largest number of preparation-hours of any member of the faculty.

An attempt was made in this investigation to measure teaching load by means of a combination of the three factors previously discussed. These factors were weighted upon the basis of the judgments of a group of instructors in Transylvania and Hiram Colleges. The preparation-hour and the teaching-hour have been considered as of equal importance, while the student-hour has been given a weight equal to the combined weight of the preparation-hour and the teaching-hour. For a majority of the instructors the number of preparation-hours and the number of teaching-hours differ but little or not at all. For those members of the faculty who teach no classes which are divided into sections, both factors are determined entirely by the number of hours spent in instructional work and the type of instruction given, i.e., laboratory, quiz, lecture, etc., the student-hour, a measure which is also partly dependent upon the type of instruction given, is primarily a measure of that phase of the teacher's load which is dependent upon the student-teacher contact. This includes the correction and grading of class and examination papers, student conferences, and all work directly dependent upon the number of students enrolled in classes. In the opinion of the writers the student-hour factor constitutes at least fifty per cent of teaching load. This judgment is based partly upon personal experience and partly upon the attitude of standardizing agencies and survey staffs toward the several units for the measurement of teaching loads.

In the actual calculation of the weighted index of teaching load, the average number of teaching-hours, preparation-hours, and student-hours for the whole institution is first determined. The figures for each instructor are then divided by the corresponding institutional average. For each instructor the ratio of his teaching-hours to the average teaching-hours is added to the ratio of his preparation-hours to the average preparation-

FIG. 16. TEACHING LOADS IN TERMS OF STUDENT-HOURS, PREPARATION-HOURS AND TEACHING-HOURS



* Part Time

hours and this sum is added to twice the ratio of his student-hours to the average student-hours (since it was decided to give a weight of 2 to this factor), and the sum of these ratios becomes the index of the load of the instructor. As an illustration, take the case of an instructor teaching 12 hours, having 9 preparation-hours, and having 450 student-hours. Suppose the institutional averages to be 15 teaching-hours, 12 preparation-hours, and 300 student-hours. For this particular instructor, the index of load becomes

$$\frac{12}{15} + \frac{9}{12} + \left(\frac{450}{300} \right) 2 = .80 + .75 + 3.00 = 4.55.$$

Since the index for the institution as a whole is 4.00, this figure would be interpreted as meaning that the instructor for whom data were given carries a heavier load than the average.

Figure 16, on page 179, shows the application of this index to the faculty loads at Transylvania. In this chart, the total length of the bar indicates the total index of the load of each instructor, the various shadings indicating the different component parts of the index.

The weighted measure of teaching load described in this report is far from perfect, since many factors affecting load are either given scant attention or omitted entirely. At as early a date as possible a measure less arbitrary in its nature should be substituted for the one here employed. An investigation, conducted for the purpose of devising such a measure, is now under way. In the meantime administrators must continue, either consciously or unconsciously, to measure the loads of the members of their teaching staffs. The weighted measure employed here appears to be somewhat more accurate than any single measure yet devised, and might well be used until a more scientific measure is available.

Summary

One of the most difficult problems confronting a college administration is that of equalizing the loads of the members of the teaching staff. Several methods are suggested for the

measurement of factors affecting the teaching load. The size of classes is one of these factors. Many institutions have a large number of small classes, and in several colleges the average size of classes is smaller than appears necessary for efficient service, resulting in unnecessarily high costs and frequently in heavy preparation loads for instructors.

One of the widely used measures of teaching load is the student-clock-hour, the unit of one student-clock-hour being defined as one student under instruction in lecture, quiz or laboratory for at least 50 minutes net. The average number of student-clock-hours per instructor shows a wide variation among the various colleges surveyed. Similar variations of teaching load are discovered among departments and instructors within each institution. In general the heaviest teaching loads in point of student-clock-hours per instructor are found in the education departments, with science and mathematics, history, English, and foreign languages following in the order named.

Another commonly employed unit for measuring teaching load is the teaching-hour, which means one hour per week spent by the instructor in recitation, lecture, or discussion, or one and one-half hours in the laboratory or scheduled quiz sections. This unit seems to find its principal use in fixing maximum standards, it being generally agreed that the maximum should be 16 teaching-hours.

A suggested modification of the teaching-hour measure is the preparation-hour, the modification being made to compensate for duplicate sections of the same course being taught by the same instructor. It is felt that in case an instructor has two classes in the same course, his teaching load is less than if the two classes were in different courses, since one preparation serves both classes.

It is suggested also that a weighted measure of teaching load may be derived, which is probably better than any one of the single measures previously mentioned. This index of load may be calculated by taking for each instructor the ratio of his

teaching-hours to the average teaching-hours per instructor in the college, then adding to this the ratio of his preparation-hours to the average preparation-hours, then adding to this twice the ratio of his student-hours to the average student-hours. The sum so obtained becomes the index of load and is comparable throughout the institution.

CHAPTER IX

THE FACULTIES OF THE INSTITUTIONS

Chapter VIII dealt with the problem of the service-loads of the members of the teaching staffs. In this chapter the faculties of the institutions will be discussed in some detail under the following topics: (1) salaries; (2) organization of the instructional staff; (3) retirement provisions; (4) faculty tenure; (5) faculty training; (6) contributions to scholarly literature.

Salaries

Data regarding the average salaries for 1927-28 received by members of the faculty at eight Disciples four-year colleges and universities holding membership with a regional accrediting association are given in Table 47. Average salaries are given for the whole staff, as well as for each of the faculty ranks represented. The salaries are the annual nine months salaries and do not include any extra compensation that may be paid for summer session teaching, extension work, or other activities of this kind.

TABLE 47. AVERAGE SALARIES RECEIVED BY FULL-TIME MEMBERS OF THE TEACHING STAFFS AT EIGHT DISCIPLES FOUR-YEAR COLLEGES AND UNIVERSITIES¹ HOLDING MEMBERSHIP WITH A REGIONAL ACCREDITING ASSOCIATION

INSTITUTION NUMBER	ALL RANKS	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR
2	\$2,844	\$3,000		\$2,500	\$2,200
9	2,597	3,100		2,200	1,800
10	2,552	2,676			1,850
11	2,470	2,893		2,700	1,600
3	2,370	3,300	\$2,550	2,100	1,700
12	2,363	2,744	2,600	1,400	1,300
8	2,262	2,569			1,691
14	2,208	2,538	1,962	1,816	1,545
Median Institution	\$2,420	\$2,819	\$2,550	\$2,150	\$1,696

¹Data for two of the institutions are for 1926-27, the others all being for 1927-28.

Table 47 shows that among these eight institutions there is a wide range in average salary paid members of the instructional staff. The average salary for all ranks ranges from an annual salary of \$2,844 at institution number 2 to an annual salary of \$2,208 at institution number 14. When considered separately by ranks, a still greater variation is noted. Salaries of faculty members holding ranks of professor vary from an average salary of \$3,300 down to an average salary of \$2,538. The rank of associate professor is found in only three of the eight institutions, but the average salaries paid for this rank where it is found vary from \$2,550 to \$1,962. Annual salaries paid faculty members holding the rank of assistant professor vary from \$2,700 down to \$1,400. Annual salaries paid faculty members holding the rank of instructor vary from \$2,200 down to \$1,300.

Comparable data are available for twenty denominational colleges and universities holding membership with the North Central Association of Colleges and Secondary Schools. These data are given in Table 48.

Some interesting comparisons are possible between the data of Tables 47 and 48. First of all, note from Table 48 that the average salary for all ranks in the median college of the twenty North Central institutions is \$2,522, as compared with an average of \$2,420 for the median college of the Disciples institutions. This is a difference of \$102 in favor of the institutions holding membership with the North Central Association. Not only do the North Central institutions have a higher average salary for the whole faculty than the Disciples institutions, but the same is true for every faculty rank. The differences of the median institutions in favor of the North Central institutions for professors, associate professors, assistant professors, and instructors respectively are \$41, \$50, \$79, and \$79.

Not only are the average salaries for all ranks lower at the Disciples institutions, but a comparison of the range of average salaries exhibited among the institutions of Tables 47 and 48 is significant. The highest average salary for all ranks combined for Disciples institutions is \$2,844; for North Central institutions it is \$3,529; the lowest average salary for all ranks

TABLE 48. AVERAGE SALARIES RECEIVED BY FULL-TIME MEMBERS OF THE TEACHING STAFFS OF TWENTY FOUR-YEAR DENOMINATIONAL COLLEGES AND UNIVERSITIES HOLDING MEMBERSHIP WITH THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS, 1927-1928

INSTITUTION NUMBER ¹	ALL RANKS	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	INSTRUCTOR
1	\$3,529	\$4,000	\$3,500	\$2,800	\$2,500
2	2,899	3,642	3,137	2,605	2,059
3	2,840	3,358		2,500	1,550
4	2,705	3,000	2,575	2,100	1,550
5	2,679	3,043	2,600	2,314	1,962
6	2,675	3,027	2,800	2,276	1,775
7	2,649	3,097	2,730	2,265	1,687
8	2,627	3,599	2,978	2,511	1,705
9	2,561	2,900	2,550	2,150	1,550
10	2,539	2,742	2,780	2,297	
11	2,505	3,000		2,000	1,850
12	2,505	2,750		2,209	1,850
13	2,489	2,750		2,250	2,150
14	2,403	2,821	2,126	2,100	1,715
15	2,382	2,500	2,250	1,750	
16	2,350	2,500			1,500
17	2,298	2,330	2,140		
18	2,239	2,616	2,090	2,009	1,781
19	2,127	2,446		2,020	1,770
20	2,124	2,230		2,000	2,000
Median	\$2,522	\$2,860	\$2,600	\$2,229	\$1,775

¹The institutions are listed in the table in order of size of average salary. The names of the institutions included are as follows:

Antioch	Franklin	Illinois Wesleyan	Monmouth
Coe	Gustavus Adolphus	Illinois Woman's College	Ohio Wesleyan
Concordia	Hamline	James Milliken	St. Olaf
Depauw	Huron	Knox	Shurtleff
Earlham	Illinois College	Macalester	Wabash

combined for Disciples institutions is \$2,208; for North Central institutions it is \$2,124. For the rank of professor, the highest average salary found among the Disciples institutions is \$3,300; among the North Central institutions the highest is \$4,000; similarly the lowest average salary found for professors among the Disciples institutions is \$2,538; among the North Central institutions the lowest is \$2,230. Similar comparisons may be made for each of the faculty ranks shown in Tables 47 and 48; in every instance the highest Disciples institution is below the highest North Central institution.

From the data shown in Tables 47 and 48, it is impossible to escape the conclusion that faculty salaries at the Disciples institutions are too low. The North Central institutions with which comparisons are made are by no means to be considered ideal from the standpoint of salaries paid. Accreditation by the North Central Association is not at present based upon any standard with respect to faculty salaries. The institutions of this group simply represent the average run of denominational colleges which have been able to meet the standards of the accrediting association.

Data are available for comparative salaries at state supported institutions. In Table 49 are given the average salaries of the combined faculties (regardless of rank) of all the publicly supported universities of seven north central states, together with the salaries paid at Indiana and Purdue Universities.

TABLE 49. AVERAGE SALARIES FOR 1925-26 OF FULL-TIME MEMBERS OF THE INSTRUCTIONAL STAFFS AT INDIANA UNIVERSITY AND PURDUE UNIVERSITY, AND AVERAGES FOR PUBLICLY SUPPORTED UNIVERSITIES OF SEVEN NORTH CENTRAL STATES¹

	ARTS AND SCIENCES	AGRICUL- TURE	ENGINEER- ING	LAW	MEDICINE
Combined institu- tions of seven states	\$2,878	\$2,989	\$2,945	\$5,775	\$3,763
Indiana University	2,728			4,000	3,250
Purdue University	2,359	3,142	2,613		

¹Taken from the *Report of a Survey of the State Institutions of Higher Learning in Indiana*, F. W. Reeves, Director, December, 1926. Published by Board of Public Printing, State House, Indianapolis.

Table 50 shows similar data for the two state normal schools in the state of Indiana.

TABLE 50. AVERAGE SALARIES OF FULL-TIME FACULTY MEMBERS FOR 1925-26 AT THE INDIANA STATE NORMAL SCHOOLS

	AVERAGE OF ACTUAL SALARIES RECEIVED 42 WEEKS	AVERAGE SALARY COMPUTED ON A BASIS OF 36 WEEKS
Terre Haute	\$2,794	\$2,395
Muncie	2,696	2,311
Both institutions combined	2,751	2,358

The preceding data have dealt with four-year institutions. Data are also available showing similar figures for the junior colleges. Table 51, which follows, shows the average of salaries paid at four junior colleges of Disciples of Christ. The institutions are Carr-Burdette College, Christian College, Randolph College, and William Woods College.

TABLE 51. SALARIES AT DISCIPLES JUNIOR COLLEGES FOR INSTRUCTORS GIVING FULL TIME TO THE WORK OF THE INSTITUTIONS FOR 1925-1926

INSTITUTION NUMBER	SALARY OF DEAN	MAXIMUM SALARY OF INSTRUCTOR	AVERAGE SALARY OF INSTRUCTOR	MINIMUM SALARY OF INSTRUCTOR	NUMBER ON TEACHING STAFF
6	\$3,200	\$1,800	\$1,611	\$1,300	11
19	2,450	2,050	1,711	1,575	11
5		1,785	1,565	1,455	8
15 ¹	3,000	3,300	1,950	1,200	8

¹For 1926-27.

For purposes of comparison, data are presented in Table 52 showing the salaries at seventeen junior colleges holding membership with the North Central Association of Colleges and Secondary Schools.

A comparison of the data presented in Table 52 with those presented in Table 51 shows that the median of the average salaries of instructors for the seventeen junior colleges accredited by the North Central Association exceeds the average salary at each of the four Disciples junior colleges by 27 per cent, 20 per cent, 31 per cent and 5 per cent, respectively.

From these comparisons of salary cost, it is evident to the writers that the salaries at all of the Disciples junior colleges are considerably lower than is advisable in order that these institutions may compete with surrounding junior colleges of high rank. Therefore, it is recommended that the salaries be increased to an amount at least equal to the medians represented in Table 52. It appears advisable also that faculty promotion in salary should be based upon qualifications, and that in some instances additional graduate training should be demanded of the staff members before higher salaries are paid. A salary

TABLE 52. FACTS CONCERNING SALARIES¹ AND NUMBER² OF FACULTY MEMBERS IN SEVENTEEN JUNIOR COLLEGES³ HOLDING MEMBERSHIP WITH THE NORTH CENTRAL ASSOCIATION, 1925-1926

INSTITUTION NUMBER	SALARY OF PRES. OR PRINCIPAL	SALARY OF DEAN	MAXIMUM SALARY OF IN- STRUCTOR	AVERAGE SALARY OF IN- STRUCTOR	MINIMUM SALARY OF IN- STRUCTOR	NUMBER OF TEACHING STAFF
1	\$12,500	\$4,500	\$9,450	\$3,000	\$1,650	48
2	5,000	-----	3,200	2,800	2,000	35
3	-----	-----	3,000	2,664	2,200	21
4	-----	-----	3,200	2,600	1,800	16
5	6,000	3,600	3,050	2,500	1,800	51
6	3,800	2,760	2,760	2,400	2,200	9
7	2,000	2,100	2,500	2,250	2,000	7
8	3,800	2,115	2,520	2,130	1,755	6
9	4,000	3,200	2,700	2,050	1,500	10
10	3,900	3,000	2,500	2,000	1,700	17
11	3,000	2,600	2,400	2,000	1,200	24
12	-----	3,000	2,500	1,950	1,800	10
13	5,400	2,800	2,800	1,800	1,350	8
14	1,976	1,872	1,768	1,716	1,300	15
15	-----	2,000	2,060	1,600	1,200	11
16	2,080	1,900	1,800	1,600	1,200	38
17	2,000	-----	1,800	1,500	1,200	22
Highest	\$12,500	\$4,500	\$9,450	\$3,000	\$2,200	51
Lowest	1,976	1,872	1,768	1,600	1,200	6
Median	3,800	2,760	2,520	2,050	1,700	16

¹Salaries listed include value of house rent or board and lodging when such is provided by the institution.

²Part-time teachers have been omitted when specified as such.

³The institutions included in the group are Broadview, Central, Christian, Emanuel Missionary, Graceland, Grand Rapids, Hibbing, Joliet, Junior College of Chicago College of Osteopathy, Kansas City, Mason City, Mt. St. Charles, North Eastern Oklahoma, Rochester, St. Joseph, Stevens, Union, Virginia, and William Woods.

schedule so constructed serves as a constant spur to members of the faculty to improve their efficiency and increase their scholastic training.

The problem of salaries is closely related to the problem of faculty organization. In institutions with limited funds available for salaries, it is often advisable to increase the student load of the staff members and thus decrease the number of instructors in order that increases can be made in salaries. This problem is given further consideration under the following section of this report, dealing with the organization of the instructional staff.

Organization of the Instructional Staff

There are few factors related more closely to the efficiency of an institution than the organization of its instructional staff. The problem as to the number of members of a staff who should be given the rank of professor, assistant professor, or instructor is important, since the policy maintained with respect to faculty promotions is related closely to the most effective use of those funds available for salary expenditures. A large per cent of the faculty may be given professorial rank, and a small per cent the rank of instructor, or the reverse may be true. In the larger universities general practice endorses the latter plan, not only because it is much more economical but also because it appears to be more effective as a means of developing a strong faculty.

Table 53, which follows, shows the per cent of total faculty members holding each of the four instructional ranks at ten Disciples institutions, during the year 1927-28.

TABLE 53. RANKS HELD BY FULL-TIME MEMBERS OF THE TEACHING STAFFS OF TEN DISCIPLES COLLEGES, 1927-1928

INSTITUTION NUMBER	NUMBER OF TEACHERS	PER CENT HOLDING RANK OF PROFESSOR	PER CENT HOLDING RANK OF ASSOCIATE PROFESSOR	PER CENT HOLDING RANK OF ASSISTANT PROFESSOR	PER CENT HOLDING RANK OF INSTRUCTOR
18	21	62		14	24
4	10	80		10	10
7	22	55		18	27
2	25	76		12	12
3	57	30	7	33	30
8	20	80	20	--	--
9	37	52	--	32	16
10	20	85	--	--	15
11	28	64	--	4	32
14	25	64	8	28	--
Average	26	58	4	19	19

Table 53 shows that, on the average, in these ten institutions, 58 per cent of the faculty members are given the rank of professor, 4 per cent the rank of associate professor, 19 per cent the rank of assistant professor, and 19 per cent the rank of

instructor. The rank of associate professor is used in only three of these institutions, the rank of assistant professor does not appear in the case of two institutions, and two institutions do not use the rank of instructor. The several institutions show a wide variation from the averages noted above. In the case of the rank of professor, one institution places 85 per cent of its staff at this rank, while another has only 30 per cent. The per cent holding the rank of associate professor varies from 20 per cent to 7 per cent. The per cent holding the rank of assistant professor varies from 33 per cent to 4 per cent. The per cent holding the rank of instructor varies from 32 per cent to 12 per cent.

The data of Table 53, with their high degrees of variation among the several institutions, would indicate that there has been no model for the organization of a teaching staff in the Disciples institutions. The fact that considerably more than half of the instructors of these ten institutions hold the rank of professor might indicate that there has been a careless use of the professorial rank. This is also borne out by the failure to have staff members holding the rank of associate professor at all except three of the institutions.

Data are available showing the organization of teaching staffs in twenty denominational four-year colleges and universities holding membership with the North Central Association of Colleges and Secondary Schools in 1927-28. These data are given in Table 54 on page 191.

A comparison of the group averages shown in Tables 53 and 54 indicates that the Disciples colleges have a larger proportion of faculty members holding the rank of professor than is the case with the North Central institutions. The Disciples colleges have a smaller proportion of faculty members holding the ranks of associate professor and instructor than is the case with the North Central institutions. There is little difference in the two groups with respect to the per cent of faculty members holding the rank of assistant professor.

A direct comparison of this type between institutions of different sizes must be interpreted with care. Obviously the

TABLE 54. RANKS HELD BY FULL-TIME MEMBERS OF THE TEACHING STAFFS WITH THE RANK OF INSTRUCTOR OR ABOVE OF TWENTY FOUR-YEAR DENOMINATIONAL COLLEGES AND UNIVERSITIES HOLDING MEMBERSHIP WITH THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS, 1927-1928

INSTITUTION NUMBER ¹	NUMBER OF TEACHERS	PER CENT HOLDING RANK OF PROFESSOR	PER CENT HOLDING RANK OF ASSOCIATE PROFESSOR	PER CENT HOLDING RANK OF ASSISTANT PROFESSOR	PER CENT HOLDING RANK OF INSTRUCTOR
1	38	50	26	5	19
2	39	59	3	18	20
3	30	46	—	17	37
4	83	37	9	27	27
5	41	51	—	32	17
6	23	48	26	17	9
7	20	85	—	—	15
8	34	59	6	20	15
9	17	76	12	12	—
10	20	55	—	15	30
11	28	57	—	39	4
12	24	54	—	8	38
13	25	64	20	4	12
14	34	26	—	29	15
15	32	37	16	47	—
16	25	56	12	4	28
17	106	29	17	19	35
18	55	45	9	22	24
19	12	83	17	—	—
20	28	57	7	14	22
Average	36	49.2	9.7	19.8	21.3

¹For a list of the names of the institutions, see footnote to Table 48. A given number, such as institution Number 1, does not refer to the same institution in both Table 48 and Table 54.

smaller institution will have a higher per cent of its staff members at the high ranks than will the large institution, although even in such cases care should be taken to avoid extremes. At the same time there could be no objection to a high per cent of staff members with the rank of professor providing each of the persons holding this rank has the training and experience to qualify him for the rank. It is admitted that the North Central institutions used for comparison in Table 54 do not represent the ideal situation with respect to organization of teaching staff. The only point of the comparison is that the Disciples institutions as a group are more overloaded at the higher ranks than are the North Central institutions.

Data are available whereby a comparison may be made with state-supported institutions.¹ In the state colleges and universities of seven of the north central states, the per cents of staff members holding the several ranks in 1923-24 were as follows: Deans and professors, 27.2; associate professors, 11.2; assistant professors, 22.9; instructors, 38.7. Thus only 38.4 per cent of the staff members of these state institutions hold ranks above that of assistant professor. In contrast, 62 per cent of the faculty members of the Disciples institutions, and 58.9 per cent of the faculty members of the North Central Association institutions, as shown by Tables 53 and 54 respectively, hold ranks above that of assistant professor. However, the caution previously mentioned regarding the interpretation of these data for institutions of different sizes must be observed.

Some of the objections to a faculty organization with too large a proportion of staff members holding the rank of professor may be briefly stated.

In the first place, such a situation is accompanied by the development of a relatively large number of departments within the institution. In a small institution where a majority of the professors are also heads of departments, staff members tend to become dissatisfied unless the professorial rank is accompanied by departmental head-ship. Under such pressure the administration frequently increases the number of departments, merely to create a head-ship for a newly advanced professor. Some institutions, with from 500 to 750 students enrolled, have been found with as many as eighteen or twenty different departments, a number which is larger than is necessary for an institution of such a size. The increase in number of departments is often accompanied by an increase in the offerings of the institution. This in turn results in an increase in the number of small classes. The disadvantage of an increased number of small classes has already been pointed out.

A second objection to an organization with too large a proportion of the faculty holding the rank of professor is that it

¹Indiana Survey Commission, *Report of a Survey of the Institutions of Higher Learning in Indiana*, p. 111. Published by Board of Public Printing, State House, Indianapolis.

is symptomatic of a policy of advancing staff members in title as a reward for long service, rather than on a basis of merit. Particularly in an institution where funds are limited, promotions in rank may be passed out in lieu of salary increases, without regard to the resources of the institution. Thus, the presence of a large per cent of faculty holding the rank of professor usually indicates a fundamental defect in the policy of promoting faculty members.

A third objection to having a large proportion of the faculty with the rank of professor is that it practically prohibits a satisfactory recognition for the few outstanding faculty members of exceptional ability and training, who deserve such recognition. Not only is the professorial rank cheapened, but there is usually a shortage of funds with which to pay high salaries to these exceptionally well qualified men. The large proportion of staff members at the higher ranks results in a bringing down of all salaries to approximately the same low level, with no opportunity to exceed this average by any considerable amount. In consequence of such a policy, the institution tends to lose its best faculty members to competing institutions which have adopted the policy of paying attractive salaries to outstanding men.

Certainly there ought to be a limit to the number of professors that can be maintained in any institution, the limit being graduated upon the basis of the size of the institution. What this limit should be has not been definitely determined in actual practice, for there appears to be no model for the development of either departments or colleges. An attempt will be made in this report to indicate what seem to be desirable and undesirable organizations for institutions of various sizes.

These desirable and undesirable plans of faculty organization are given in Table 55. The plans for faculty organization listed as desirable are recommended for institutions with limited funds available for salary expenditures. The plans of organization listed as undesirable represent plans similar to those now existing in a considerable number of institutions surveyed by the writers. In the case of each institution of a given

TABLE 55. FACULTY ORGANIZATIONS FOR COLLEGES WITH LIMITED FUNDS

NUMBER OF STUDENTS	AMOUNT AVAILABLE		TYPE OF ORGANIZA- TIONS	NUMBER OF DEPART- MENTS	PROFESSORS		ASSOCIATE AND ASSISTANT PROFESSORS		INSTRUCTORS		STUDENTS PER TEACHER
	FOR INSTRUCTURAL SALARIES	TOTAL			NO.	AV. SALARY	NO.	AV. SALARY	NO.	AV. SALARY	
100	\$ 24,000	240	{ Desirable Undesirable	8 10	8 11	\$3,000 2,182					12 9
200	35,200	176	{ Desirable Undesirable	8 12	8 12	3,500 2,333			4 4	\$1,800 1,800	17 12
300	50,400	168	{ Desirable Undesirable	8 14	8 17	4,000 2,341	4 2	\$2,800 2,200	4 4	1,800 1,800	19 13
500	77,400	155	{ Desirable Undesirable	12 16	12 21	4,000 2,305	6 10	2,800 2,000	7 5	1,800 1,800	20 13
750	112,500	150	{ Desirable Undesirable	13 17	14 21	4,093 2,894	12 12	2,800 2,500	12 12	1,800 1,800	20 17
1,000	150,000	150	{ Desirable Undesirable	14 18	18 30	4,467 2,333	12 22	2,800 2,000	20 20	1,800 1,800	20 15
2,000	300,000	150	{ Desirable Undesirable	16 24	30 63	4,633 2,571	25 30	3,200 2,200	45 40	1,800 1,800	20 15

size, the total budget allowance for faculty salaries has been kept at the same figure in both the desirable and the undesirable types of organizations.

Table 55 is read as follows, taking as an example the type of institution having 500 students. In this institution having 500 students the amount available for instructional salaries is presumed to be \$77,400, which is equivalent to \$155 per student. An undesirable organization, which represents a condition actually found, would be to have 16 departments, with an instructional staff as follows: 21 professors at an average salary of \$2,305; 10 associate and assistant professors at an average salary of \$2,000; and 5 instructors at an average salary of \$1,800. The ratio of students to faculty members in this undesirable type of organization would be 13 to 1. In contrast, a desirable type of organization for an institution of this same enrolment, having the same amount of money available for instructional salaries, would be to have 12 departments, with an instructional staff as follows: 12 professors at an average salary of \$4,000; 6 associate and assistant professors at an average salary of \$2,800; and 7 instructors at an average salary of \$1,800. The ratio of students to faculty members in this case would be 20 to 1.

In general the desirable organizations call for fewer staff members than the undesirable organizations, resulting at the institutions with desirable organizations in somewhat larger ratios of students to teachers and smaller percentages of staff members holding the higher ranks. One result of the difference in ratio of students to teachers, and in the percentage of staff members holding the higher ranks, is that the average salaries received by staff members holding the higher ranks are much lower at the institutions with undesirable organizations than at the institutions with desirable organizations.

In the case of the plans of organization recommended as desirable it is not assumed that all staff members holding the same rank in an institution will receive equal salaries. As an illustration of this point, it is possible that the salaries paid professors at an institution with 1,000 students enrolled may range

from \$3,500 or \$4,000, to \$5,500 or \$6,000. Likewise, salary variations of a similar nature may exist among the staff members of all ranks at the institution.

The objection may be raised that a salary of \$1,800 is not adequate for instructors. Possibly this is true in some localities. It may be that some institutions will find it advisable to pay an average salary of \$2,000 or above to instructors. However, in most fields \$1,800 will obtain the services of a young instructor with a minimum of training at least equal to that required for a Master's degree. In some communities for some types of teaching a salary of \$1,800 will obtain the services of instructors with a considerable amount of training in addition to that required for a Master's degree. Scholastically an instructor with a Master's degree is as far in advance of junior-college students as an instructor with a Doctor's degree is in advance of senior-college students.

Appointments to instructorships should always represent temporary appointments. Only the most capable instructors should be promoted to assistant professorships, and later to associate professorships or to professorships. Such promotions should be made only when the vacancies occur at the higher ranks or when additional funds available for salaries permit increases in the number of staff members employed at the higher ranks. Promotions from instructorships to higher ranks should be based upon merit and ability—never upon length of service. Even in the event of a vacancy in one of the positions of higher rank it should not be thought necessary to fill the position by promotion unless the man already in the institution is at least as desirable as any one who could be obtained from any other source.

At an institution of 750 students it may not be possible to promote to higher ranks more than three or four of the instructors within a period of from five to ten years. Under an arrangement of this kind it appears probable that a number of instructors would seek promotions at other institutions while others would leave the profession of college teaching. This is as it should be. Only the most capable instructors should be

induced to remain in the profession by being awarded college professorships. Several desirable results might be expected to follow the adoption of the plans of organization listed as desirable: (1) The relatively high salaries paid to staff members of professorial rank would make possible the employment of a considerable number of superior teachers. It is believed that superior teachers can teach relatively large classes more effectively than mediocre or poor teachers can teach small classes. (2) The relatively high salaries paid to the staff members holding the higher ranks would be an incentive for capable instructors to remain in the institution and prepare themselves to do more effective work. (3) The less capable instructors would either leave the profession of college teaching or leave the institution to accept employment at some other institution where the prospects for promotion appear to be greater. It appears probable that what would actually happen would be that the less capable instructors would receive their promotions at institutions having faculty organizations listed as undesirable. Higher education would be benefited if the less capable instructors should leave the profession; whether they leave the profession or merely leave the institution, the institution which they leave would be benefited.

The plan outlined above calls for larger classes, and also for a period of apprenticeship for staff members. At the end of this temporary employment during which time staff members hold the rank of instructor, they may either be promoted, or dropped, or retained, if they wish to remain, at low salaries if their teaching is satisfactory but not excellent.

Retirement Provisions

Many of the colleges surveyed have no retirement provisions for the members of their staffs. It is not possible to measure objectively the extent to which the lack of such provisions handicaps these institutions. This lack must tend, however, to place them at a disadvantage, since many institutions of higher learning the country over have retirement provisions for faculty members. The present tendency is for more and more

institutions to make some provision for retirement. The absence of adequate provision for old age disability retirement is a discouragement to staff members who have rendered long service in one institution and would like to remain there until their retirement. If salaries are sufficiently high, institutions or groups of institutions need not assume any responsibility for retirement provisions; however, the salary situation in most colleges and universities is such that retirement provisions should be made at an early date.

Some of the institutions now have large percentages of old people on their staffs, and are on the way to congestion in the older ages. The only cure for this evil of accumulation of older men who have passed their days of real usefulness on the staffs of institutions is the development of adequate pension systems. Few things add to the stability of faculties and to their morale more than the setting up of a pension plan.

Details as to the way in which a suitable plan can be installed and administered can be ascertained from the Teachers' Insurance and Annuity Association of America. The purpose of this Association, as stated in its charter, is "to provide insurance and annuities for teachers and other persons employed by colleges, by universities, or by institutions engaged primarily in educational or research work; to offer policies of a character best adapted to the needs of such persons on terms as advantageous to its policy-holders as shall be practicable; and to conduct its business without profit to the corporation or to its stockholders." The writers are of the opinion that the Teachers' Insurance and Annuity Association is at the present time the most economical agency through which to arrange for retirement provisions for faculty members.

Faculty Tenure

Some of the colleges surveyed are constantly losing staff members. A part of this loss is due to the fact that often individual staff members develop more rapidly than opportunities for advancement occur within the institutions with which they are connected. Younger men become trained and equipped to

head departments before opportunities are available in the institutions at which they are teaching. As a result they transfer to other institutions. Situations of this kind are not to be deplored; they are to be expected. It is not reasonable to expect to keep a constant staff at any institution. However, the annual turnover should not be so great as to make continuity of policy difficult.

During the past three years the annual turnover among Disciples colleges has ranged from a loss of no staff members at some institutions during one or more of these years to a turnover as high as 20 per cent during a single year at other institutions. At the institutions where the annual turnover has been large, the losses have often been from among the staff members holding the higher ranks. Opportunities for salary increases and improved working conditions have attracted these men to state-supported institutions or to larger privately endowed universities. A large annual turnover at the higher ranks may be, and usually is, much more serious than an equally large annual turnover in the ranks of instructor and assistant professor. This is true particularly when promotion is based upon merit rather than upon length of service. However, at one or two of the institutions surveyed where promotion has been based primarily upon length of service rather than upon merit, a large annual turnover has also occurred in the higher ranks. In cases of this kind a large annual turnover appears to be an excellent thing for the welfare of an institution. Many institutions might now have stronger faculties than they do have if the turnover among staff members of high rank and low qualifications had been greater than it has been; relatively young men and women with excellent qualifications can be employed as instructors and assistant professors at salaries no higher than those now received by older professors and associate professors with relatively low qualifications.

Comparative data relating to faculty turnover are available in a study made recently by the Society for the Promotion of Engineering Education.¹ In 71 engineering schools in America

¹*Study of Engineering Teaching Personnel*—A portion of the investigation of engineering education conducted under a grant by the Carnegie Corporation.

the per cent of annual loss in each of the several ranks for a five-year period from 1920 to 1924, inclusive, was as follows: professors, including deans, 2.4; associate professors, 3.15; assistant professors, 4.8; instructors, 13.0; entire staff, exclusive of assistants and unclassified members, 6.8. The per cents of turnover shown for the several ranks of engineering staff members is not considered alarming because of the fact that the greatest turnover is in the lower ranks.

The staff organizations and salary schedules proposed in a previous section of this chapter will prevent the unduly large annual turnover of the more capable staff members which is now occurring at a number of institutions. In an institution which bases promotion primarily upon length of service, an average annual turnover of 10 per cent often represents a serious loss, because almost always those leaving the institution are from among the more capable teachers. An average annual faculty turnover of 10 per cent would not be at all serious, however, in an institution which (1) follows the policy of basing faculty promotion strictly upon merit without giving consideration to length of service except in so far as length of service increases efficiency, and (2) which adopts a salary schedule permitting the payment of a limited number of relatively high salaries among staff members of professorial rank.

The adoption by an institution of the type of staff organization proposed in this report will result ultimately in a faculty relatively stable at the higher levels. The turnover among staff members of the lower ranks will be relatively large, some instructors seeking promotion at other institutions and others among the less capable leaving the profession because of a lack of promotion. From time to time, as vacancies occur at the higher ranks, or as the work of the institution expands, the more capable of the younger staff members will receive promotions to higher ranks and as a result, will receive higher salaries. If, when a vacancy occurs at the higher ranks, there is no one of exceptional ability among the staff members of lower rank, the vacancy should be filled by an appointment from outside the institution.

Faculty Training

Data are presented in Tables 56 and 57 showing the years of training of full-time members of the teaching staffs holding the rank of instructor or above at seven four-year Disciples colleges and universities, and at twenty colleges and universities holding membership with the North Central Association of Colleges and Secondary Schools. The Disciples institutions included are those holding membership with the North Central Association of Colleges and Secondary Schools. Only North Central institutions are included because the data presented in Table 57 for comparative purposes are for institutions holding membership with the North Central Association of Colleges and Secondary Schools. None of the institutions included in Table 56 are included in Table 57.

TABLE 56. YEARS OF TRAINING OF FULL-TIME MEMBERS OF THE TEACHING STAFFS HOLDING THE RANK OF INSTRUCTOR OR ABOVE AT SEVEN FOUR-YEAR DISCIPLES COLLEGES AND UNIVERSITIES, 1927-1928

INSTITUTION NUMBER	NUMBER OF TEACHERS	PER CENT WITH THREE YEARS OR MORE GRADUATE TRAINING	PER CENT WITH TWO YEARS GRADUATE TRAINING	PER CENT WITH ONE YEAR GRADUATE TRAINING	PER CENT WITH DEGREES BUT LESS THAN ONE YEAR GRADUATE TRAINING	PER CENT WITH LESS THAN BACHELOR'S DEGREE OR EQUIVALENT
2	25	32	36	16	16	0
3	57	29	12	47	12	0
8	20	15	10	65	10	0
9	37	32	11	46	11	0
10	20	35	45	10	10	0
11	28	35	3	39	18	3
14	25	28	36	36	0	0
Average	30	29.8	18.9	40.0	10.8	.5

An examination of Table 56 shows that the staff members with three years or more of graduate training range from 15 per cent of the total number of staff members at institution number 8 to 36 per cent at institution number 11. The staff

members with two years or more graduate training range from 80 per cent of the total number at institution number 10 to only 25 per cent at institution number 8.

TABLE 57. YEARS OF TRAINING OF FULL-TIME MEMBERS OF THE TEACHING STAFFS HOLDING THE RANK OF INSTRUCTOR OR ABOVE AT TWENTY FOUR-YEAR DENOMINATIONAL COLLEGES AND UNIVERSITIES HOLDING MEMBERSHIP WITH THE NORTH CENTRAL ASSOCIATION OF COLLEGES AND SECONDARY SCHOOLS, 1927-1928

INSTITUTION NUMBER ¹	NUMBER OF TEACHERS	PER CENT WITH THREE YEARS OR MORE GRADUATE TRAINING	PER CENT WITH TWO YEARS GRADUATE TRAINING	PER CENT WITH ONE YEAR GRADUATE TRAINING	PER CENT WITH DEGREES BUT LESS THAN ONE YEAR GRADUATE TRAINING	PER CENT WITH LESS THAN BACHELOR'S DEGREE OR EQUIVALENT
1	38	34	18	18	30	0
2	39	28	28	31	13	0
3	30	24	3	33	40	0
4	83	29	12	36	23	0
5	41	27	10	29	34	0
6	23	17	43	30	10	0
7	20	40	0	4	20	0
8	34	41	24	23	12	0
9	17	35	0	53	12	0
10	20	50	0	45	5	0
11	28	50	25	18	7	0
12	24	21	42	25	12	0
13	25	40	12	40	4	4
14	34	38	3	35	24	0
15	32	41	0	50	9	0
16	25	28	24	28	20	0
17	106	29	0	43	28	0
18	55	34	8	47	11	0
19	12	33	33	25	9	0
20	28	29	32	18	21	0
Average	36	32.6	13.3	34.6	19.4	.1

¹For a list of the names of the institutions, see footnote to Table 48. A given number, such as institution number 1, does not refer to the same institution in both Tables 48 and 57.

The data presented in Table 57 show that the percentage of staff members with three years or more of graduate training is slightly higher for the twenty North Central Association insti-

tutions as a group than for the group of seven Disciples colleges. However, the percentage with two years or more of graduate training is higher for the Disciples colleges than for the North Central Association institutions. While 49 per cent of the staff members of the Disciples colleges have two years or more of graduate training, only 46 per cent of the staff members of the North Central Association institutions have two years or more of graduate training. Furthermore, the per cent of staff members with less than one year of graduate training in the North Central Association institutions is almost twice as large as it is for the Disciples colleges. In interpreting these data, it must not be thought that the condition in the North Central Association institutions represents the ultimate ideal with regard to qualifications of faculty members. It is a fact generally recognized by those who have studied the situation that the present standards of the North Central Association do not guarantee an adequately trained staff in each of the accredited institutions.

It is interesting to compare the training of the members of the teaching staffs of Disciples four-year colleges with that of a group of staff members of state institutions. Table 58 shows similar data for the four state-supported institutions of higher education in Indiana.¹

The data presented in Table 58 show that the average training of the staff of Indiana University is greater than the average for either the Disciples institutions or for the North Central Association institutions; however, the training of the faculties of Purdue University and of the two teacher-training institutions appears to be considerably less than the average for either the North Central Association institutions or the Disciples colleges.

A highly significant fact is the clearly evident tendency to select faculty members largely from the graduates of colleges affiliated with the communion. It represents an attempt to preserve a tradition and extend the faith, but results in a tend-

¹Indiana Survey Commission, *Report of a Survey of the State Institutions of Higher Learning in Indiana*, December, 1926. Pub. by Board of Public Printing, State House, Indianapolis.

TABLE 58. HIGHEST DEGREES HELD BY PROFESSORS, ASSOCIATE PROFESSORS, ASSISTANT PROFESSORS, AND INSTRUCTORS AT THE FOUR STATE-SUPPORTED INSTITUTIONS OF HIGHER EDUCATION IN INDIANA, 1926-1927

INSTITUTION AND DEGREE HELD	NO. OF PROFESSORS	NO. OF ASSOCIATE PROFESSORS	NUMBER OF ASSISTANT PROFESSORS	NO. OF INSTRUCTORS	TOTAL NUMBER REPORTED	ALL RANKS PER CENT
Indiana University	70	30	52	68	220	—
Ph.D.	43	20	15	3	81	36.82
M.A. or M.S.	12	5	20	32	69	31.36
A.B., B.S., or Ph.B.	4	3	11	27	45	20.46
Professional Degree	7	2	1	1	11	5.00
No Degree	4	—	5	5	14	6.36
Purdue University	80	54	98	87	319	—
Ph.D.	12	10	7	2	31	9.72
M.A. or M.S.	24	18	37	32	111	34.80
A.B., B.S., or Ph.B.	26	16	36	35	113	35.42
Professional Degree	15	8	9	4	36	11.29
No Degree	3	2	9	14	28	8.78
Indiana State Normal	26	9	24	3	62	—
Ph.D.	2	—	—	—	2	3.23
M.A. or M.S.	13	9	9	—	31	50.00
A.B., B.S., or Ph.B.	10	—	10	3	23	37.10
Professional Degree	—	—	1	—	1	1.61
No Degree	1	—	4	—	5	8.06
The Ball Teachers College	20	9	15	5	49	—
Ph.D.	—	1	—	—	1	2.04
M.A. or M.S.	12	6	9	—	27	55.10
A.B., B.S., or Ph.B.	6	2	—	5	13	26.53
Professional Degree	1	—	—	—	1	2.04
No Degree	1	—	6	—	7	14.29

ency toward educational inbreeding. In many instances it has resulted also in the selection of staff members whose highest degrees have been conferred by institutions without more than local or state recognition among educational organizations. On the whole this policy has been bad for the colleges, and should not be continued. A number of the stronger institutions appear to be modifying this policy and selecting staff members with less regard than formerly to religious affiliations. Others are selecting their new staff members largely

from among those who have obtained their first degrees from Disciples colleges and have also secured advanced degrees from universities of high standing. Either of the latter plans appears preferable to that formerly followed by almost all of the institutions of obtaining a considerable percentage of their staff members from among those individuals who had obtained their highest degrees from Disciples colleges.

Contributions to Scholarly Literature

One of the best evidences that members of a teaching staff are intellectually alive is found in the contributions which they are making to the advancement of the fields of study in which they are interested. It is not to be expected that the amount of writing and research carried on by staff members at undergraduate colleges will be equal to that carried on by staff members of the graduate schools of universities. Many excellent teachers do not contribute extensively to journals in their fields; however, live teachers are constantly finding things which they wish to contribute. A faculty which is intellectually vigorous is an inspiration to a student body.

The faculty members of a few of the small privately endowed colleges with which the writers are familiar are making important contributions each year to the literature in their respective fields. In general the institutions with which these men and women are connected are among the better institutions of America.

The number of valuable contributions which have been made to scholarly literature by the faculties of the Disciples colleges, however, is almost negligible. During the past three years less than five per cent of the staff members have made any contribution of this type. A comparison of the situation at Disciples colleges with that at two state-supported universities is enlightening.

The Indiana Survey Report shows¹ that 99 out of approximately 250 members of the faculty of Indiana University made contributions to scholarly literature during a period of three

¹Op. Cit., p. 141.

and one-half years. Fifty-five of these 99 staff members contributed original research studies which were reported in national journals. In all, 501 articles or books were contributed by these 99 men and women. At Purdue University 116 staff members out of a faculty of 325 made contributions to scholarly literature during that period. Eighty-six of these 116 members contributed original research studies which were reported in national journals. In all, 370 articles or books were written by these 116 men and women.

It is to be expected that there will be relatively more productive scholarship upon the part of staff members of universities such as Indiana and Purdue than upon the part of staff members of institutions such as those of Disciples of Christ. However, the amount of writing and research being carried on at the Disciples institutions is surprisingly small. The fact that less than five per cent of the staff members of the Disciples institutions have made contributions of this type during the past three years may indicate a lack of intellectual vigor upon the part of the faculties, or an instructional load so heavy as to make it difficult for the staff members to find time for any type of intellectual work not connected directly with classroom instruction. Possibly both factors operate to reduce the amount of productive scholarship to an amount much smaller than that which would be expected.

Summary

Unquestionably the heart and core of any college is its faculty. The salaries of members of the instructional staff at the Disciples institutions compare unfavorably with salaries at other comparable institutions.

The problem of salaries is closely related to the organization of the instructional staff. The per cent of the faculty members who should be given each faculty rank has evidently not been given serious thought at many of the institutions surveyed. The wide variation in the per cents of faculty members at each rank leads to the conclusion that there has been no model for the development of either college or department. In general,

the criticism is made that institutions have too large a per cent of their faculty holding the higher ranks of professor and associate professor.

The question of provision of pension and retirement allowances is closely related to that of salaries. In general, the institutions surveyed have inadequate retirement provisions. The suggestion is made that such provisions be made through the Teachers' Insurance and Annuity Association of America.

The problem of faculty tenure is an important one at many colleges. Some turnover in faculty personnel is to be expected, and, so long as it takes place principally at the lower ranks, is not to be deplored. It is believed that a sound system of faculty promotion together with an adequate salary schedule will relieve most of the difficulties due to undesirable turnover.

An analysis of the training of members of the faculty of the institutions surveyed indicates that, when compared with a group of accredited colleges, there is little significant difference between the two groups of institutions. Many deficiencies can be pointed out, and it is admitted that, even in the institutions used for purpose of comparison, the training of staff members is not all that could be desired.

One of the best evidences of intellectual vitality on the part of a faculty is the contributions made by its members to the advancement of their respective fields of study. The faculties of the Disciples institutions have made almost no contributions of this type that are worth mentioning, falling far below the standard that might reasonably be expected.

CHAPTER X

ACCOUNTING AND BUDGETARY PROCEDURE

Many, if not all, of the problems of college organization and administration eventually involve some aspect of finance. Consequently the group of topics dealing with financial problems is of paramount importance in the study of the college. In this and succeeding chapters the following topics are treated: (1) accounting and budgetary procedure; (2) cost studies; (3) the effective use of financial resources; (4) sources of revenue; (5) economic factors affecting the support of institutions of higher learning; and (6) scholarships and loan funds.

Accounting Procedure

The relation of a proper accounting system to an efficient and effective educational administration needs especial emphasis. If the president and the board of trustees of a college are to administer and control the institution intelligently and scientifically, they must have available at all times reliable financial information covering past transactions for use in planning for the future.

There are certain college expenditures of a general nature which do not constitute an actual part of the cost of the academic education of the students enrolled. To know whether such an activity operates at a loss or a profit, an accurate and separate account must be kept of its receipts and disbursements, including overhead charges.

In the financial reports of many colleges the expenses of operation of special departments not strictly educational in character have not been separated in the manner described above. This has made it exceedingly difficult to ascertain accurately the costs for strictly educational purposes and to compare such costs with those for other colleges of the same size and character.

Arnett says,¹ with reference to expenditures of special departments, "The cost of materials and services furnished by the college from its store rooms and central power plant must be included. The department in question (as for example the dormitory) should be charged rental for the use of college buildings to provide for interest on funds invested and also to provide a fund for replacement of the buildings and equipment used."

The financial statements of many colleges do not indicate whether the dormitories, dining halls, bookstores, and other supplementary business activities have been self-supporting, maintained with a profit, or maintained with a loss. Under the accounting system which has usually been employed, exact information concerning this matter has been somewhat difficult to obtain, since no allowance has usually been made for interest upon the money invested or for depreciation charges. It is not customary, in college accounting, to charge for interest and depreciation on the cost of the educational plant; however, such charges should be made in the case of dormitory, dining-halls, etc., since colleges do not usually consider themselves obligated to furnish board and room to students at less than the actual cost to the institution.

Trevor Arnett, in "College and University Finance," has described a system of accounting procedure which is, in the writers' opinion, satisfactory for a small private college. It is difficult, and would also be unwise, for any college to adopt, without modifications, a system of accounting and budgetary procedure prepared for some other institution. A number of minor adaptations, at least, are almost always advisable; however, the main divisions should be uniform among institutions.

At the time the survey staff was carrying on the field work at Culver-Stockton College, a representative of Peat, Marwick, Mitchell and Co., Accountants and Auditors, was preparing for the institution the report of the audit of accounts for the year ended June 30, 1925. In accordance with a suggestion of

¹Trevor Arnett, *College and University Finance*. Published by General Education Board, New York City, 1922.

President Wood, this representative and the director of the survey staff, jointly, prepared a revised system of accounts which it is believed will facilitate administrative and financial control. The revised system makes possible the computation of departmental costs and also serves as a basis for an adequate system of budgetary control.

Below is a copy of the chart of accounts for Culver-Stockton College developed jointly by the director of the survey and the auditor of the college accounts. The accounts listed in this chart provide an adequate basis for financial control of the college. This chart is presented here merely for suggestive purposes:

CODE NO.	CHART OF ACCOUNTS
	A. <i>Current Funds</i> —Operations
	I. Income—Educational
	1. From Student Fees
101	a. Tuition and Incidental
102	b. Tuition, Music
105	c. Laboratory Fees
106	d. Caution Fees
107	e. Library Fees
108	f. Miscellaneous Fees (Diploma)
	2. From Endowment Investments
	a. Unrestricted
111	(1) Interest and Dividends
112	(2) Rentals—Less expenses rental properties
115	b. Restricted (None at present)
	3. From Gifts
121	a. Unrestricted
122	b. Restricted
	4. From Miscellaneous Sources
	a. Culver-Hall (Girls Dormitory)
131	(1) Board and Room Income
132	(2) Transient Board and Miscellaneous
135	(3) Food Cost
136	(4) Salaries Cost
137	(5) Sundry Direct Expense, Repairs, etc.
139	(6) Pro-Rata Expenses, Power Plant, Laundry, Janitor
	b. Boys Dormitory
141	(1) Board and Room Income
142	(2) Transient Board and Miscellaneous
145	(3) Food Cost
146	(4) Salaries Cost
147	(5) Sundry Direct Expense
149	(6) Pro-Rata Expenses, Power Plant, Laundry

CODE
NO.

II. Expenses—Educational

1. Administrative and General

a. Executive

- 201 (1) President's Salary
- 202 (2) Other Salaries
- 203 (3) Office Expenses and Supplies
- 204 (4) Traveling Expenses

b. General

- 211 (1) Catalogues, bulletins, etc.
- 212 (2) Miscellaneous (Segregate large items)

2. Operation and Maintenance of Physical Plant

a. Heat, Light, Power, Water

- 221 (1) Salaries Engineer and Assistants
- 222 (2) Fuel
- 223 (3) Light, Water and Miscellaneous

b. Buildings and Grounds

- 225 (1) Janitor and Miscellaneous Salaries
- 226 (2) Supplies
- 227 (3) Insurance
- 228 (4) Repairs and Maintenance—Indicate details on ledger

3. Instructional

a. Salaries

b. Departmental Supplies and Expenses

- 231 (1) Chemistry
- 232 (2) Physics
- 233 (3) Biology
- 234 (4) Home Economics
- 235 (5) Music
- 236 (6) Library
- 237 (7) Other Departments

4. Departmental Equipment

- 241 a. Chemistry
- 242 b. Physics
- 243 c. Biology
- 244 d. Home Economics
- 245 e. Music
- 246 f. Library
- 247 g. Other Departments

III. Specially Designated Objects not Strictly Educational

1. Student Activities

a. Income

- 301 (1) Student Activities Fees
- 302 (2) Miscellaneous

b. Expenses

- 311 (1) Athletics
- 312 (2) Debate and Oratory
- 313 (3) Megaphone (School Paper)
- 314 (4) Milestones (School Annual)
- 315 (5) Lyceum and Miscellaneous

2. Scholarships

3. Promotion

- 331 a. Income (Itemize)

CODE

NO.	
	b. Expenses
335	(1) Salaries
336	(2) Printing, Postage and Stationery Expenses
337	(3) Advertising
338	(4) Traveling
350	4. Appropriations for Buildings and Equipment
	5. Annuities
361	a. Income from Investments
362	b. Annuity Payments

B. Current Funds—Assets and Liabilities**I. Assets**

401	1. Cash on Hand in Banks
402	2. Accounts Receivable, Students
403	3. Notes Receivable, Students
404	4. Pledges Receivable
405	5. Notes Receivable
409	6. Due from or to Other Funds
413	7. Stocks and Bonds

II. Liabilities

451	1. Advance Payments
452	2. Bursars Account
491	3. Capital Account

C. Endowment Funds**I. Assets**

501	1. Cash Awaiting Investment
505	2. Notes Receivable
506	3. Miscellaneous Receivables
509	4. Due from or to Other Funds
511	5. Farm and City Loans
512	6. U. S. Obligations
513	7. Stocks and Bonds
514	8. Real Estate

II. Liabilities

591	1. Unrestricted Gifts (Details of each gift)
592	2. Restricted Gifts
595	3. Gain or Loss on Conversion of Securities

D. Campaign Funds**I. Assets**

601	1. Cash
604	2. Unpaid Pledges
609	3. Due from or to Other Funds
612	4. U. S. Obligations
613	5. Stocks and Bonds
617	6. Expenses and Transfers

II. Liabilities

691	1. Capital Fund (Total Pledges and Contributions)
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CODE

NO.	E. <i>Annuity Fund</i>
	I. Assets
701	1. Cash
709	2. Due from or to Other Funds
711	3. Farm Loans
712	4. U. S. Obligations
713	5. Stocks and Bonds
714	6. Real Estate
	II. Capital Account—Annuity Bonds
	F. <i>Plant Accounts</i>
	I. Assets
801	1. Cash
813	2. Securities
820	3. Buildings and Equipment (Detail Sub-Accounts at Cost or Estimated Cost)
891	II. Capital Accounts (Include all specific donations, appropriations and miscellaneous revenue)
	G. <i>Student Aid Fund</i>
	I. Assets
901	1. Cash in Banks
903	2. Notes Receivable
913	3. Stocks and Bonds (If any)
	II. Liabilities
991	1. Capital Account (Donations and Interest Received)

A satisfactory college accounting system must keep a ledger for capital accounts. Arnett points out that this capital account should be the actual record of gifts, endowments, and all other receipts and their use. All appropriations from current funds or other sources for the purchase of land and buildings, the erection of new buildings, and the purchase of new permanent equipment (not replacement) should also be carried to this capital account. The account should in every instance show the actual cost of land, permanent equipment, etc., and not appraisal values. However, this does not mean that the college plant should not be appraised from time to time, and this appraised value carried as a memorandum account and shown in the financial report. Such an appraisal is necessary, not only for the purpose of furnishing information for the administrative officials and the board of trustees, but also to provide data upon the basis of which reports to accrediting associations may be made. The appraisal is also necessary for insurance purposes. In general these inventory values should represent the cost of reproduction in identical condition.

Failure of the accounting system to handle correctly the income from scholarships was noted in many institutions. In effect, either the institution really pays the fees itself for scholarship students, from current funds or other income especially set aside for such purpose, or else the fees are paid for the scholarship students from a fund not under the control of the college. In the accounting system, therefore, all fees for scholarship students should be counted as income from fees. In case scholarships are provided from permanent funds or other especially designated income under the control of the institution, the income should be recorded under the proper source as income for specially designated objects not a part of the strictly educational work, and the disbursement also recorded under the heading of specially designated objects, for the purpose of student aid. Under such circumstances, the funds are actually counted twice as income (income from student fees and income from designated objects not a part of the strictly educational work) and once as disbursement (for student aid).

Permanent funds, the income of which is specifically designated for student scholarships or other purposes not a part of the strictly educational program, ought not to be counted as a part of the endowment of the institution.

Budgetary Procedure

There would seem to be little need to dwell at length on the necessity of a sound budgetary procedure in a modern educational institution. Without a satisfactory budgetary procedure, it is impossible to control the finances of a college in such a way that the administration knows at all times the exact status of affairs.

Arnett has given a general description of an excellent system of budgetary procedure for a privately endowed college.¹ At least six months prior to the beginning of the fiscal year, departments should be asked to submit their budget needs. A statement should be supplied each department showing ex-

¹Arnett, Trevor, *op. cit.*, Chapter VI.

penditures for each item for the last previous year for which complete data are available. In a parallel column should be shown appropriations for the same items for the current fiscal year. The third column should be left blank, to be filled in by the department with the amounts of its budget requests. At the time this blank is sent out, department heads should be advised as to the general administrative policy for the coming year with respect to expansions or retrenchments, both for the institution as a whole, and for the particular department concerned.

The form for the individual departments should be arranged to show the needs under the headings of the budget, viz.: (1) for instruction; (2) for supplies and expenses; (3) for equipment and books. Each division should be fully itemized. Each member of the staff should be listed together with his salary; items of supply and expense should be given in the smallest detail permitted by the accounting system; and large items of new equipment should be specifically listed.

Any items representing expansions or increases over the previous year's budget should be noted as "important" or "desirable." In submitting their budget estimates, department heads should have opportunity to confer with the president. The president should keep a record of all conferences with the dean and department heads concerning the construction of the college budget.

From the information supplied by department heads and by the other officers who have responsibility for directing expenditures, the tentative budget is drafted by the president and business officer. The budget form suggested by Arnett¹ is an excellent one and might well be used, with whatever minor modifications are necessary to fit the particular college. It is important that the set-up of the budget conform to the chart of accounts which is used in the bookkeeping system.

The tentative budget, properly balanced between income and expenditures, should then be submitted by the president

¹Op. Cit., pp. 75-78.

to the board of trustees for their consideration and approval. The budget as adopted becomes the basis for financial control for the ensuing fiscal year.

When the budget has been adopted by the board of trustees the appropriations included become available for the expenses of the several departments. The department heads receiving appropriations for supplies should be permitted, without special action by the board of trustees or executive committee, to make requisitions and obtain supplies for their departments up to the amount of the appropriation. Thus, the budget system saves a great deal of time on the part of members of the board.

If the needs of a department prove to be greater than the appropriations made at the time the budget was adopted, a special additional appropriation should be authorized by the board of trustees before additional expenditures are incurred. Under no condition should the head of a department be permitted to spend money in excess of the amount appropriated to his office. Arnett¹ recommends that the board should revise the budget periodically, at least twice during the fiscal year, in order to care for developments that were unforeseen at the time of the passing of the budget.

Heads of departments receiving appropriations for furniture, supplies, and equipment should be notified at regular intervals throughout the year as to the amount of money remaining in their working budgets. These reports should include not only the amount of the original appropriation and the amount remaining in the treasury at the time the report is made, but also items showing the outstanding obligations of the department at the time these reports are constructed. Probably these control statements should be issued to the various departments monthly.

Freedom should be permitted in the working budget; that is, the heads of the departments should be permitted to change the allotments within their departments.

Departmental budgetary procedure of the type discussed in

¹Op. Cit., pp. 85-88.

this section of the report will permit scientific unit cost studies of the various departments of the institution. Without departmental budgetary accounting procedure, accurate cost studies are rendered impossible.

The monthly (or quarterly) report of income and expenditures should be prepared on a form similar to that of the budget, except that the column headings will be different. In the report on income, three column headings will appear, as follows: (1) amount anticipated; (2) amount received to date; (3) balance. In the report on expenditure, four column headings will appear, as follows: (1) amount appropriated; (2) amount expended to date; (3) amount requisitioned but not paid for; (4) balance available. For members of the board of trustees or of the executive committee of the board of trustees who do not care to spend the time required to analyze a detailed report of the financial status of the college each month or quarter, a summary report, including only the sub-totals of income and expenditure listed should be prepared.

Audits

The complete accounts of the institution should be audited each year and a full and complete report of the audit should be made to the board of trustees. This audit should include all the funds for which the institution is in any way responsible, both the direct expenditures for educational purposes and the supplementary business activities as well. Rotating funds and petty cash funds should be checked back to the original payments in the same manner as other accounts. In some of the institutions surveyed by the writers the annual audit has been incomplete, and certain funds, such as a rotating or petty cash fund, or the accounts of some supplementary business activities have not been included in the audit.

The audit should be made by a firm of certified public accountants who are in no way connected with or interested in the institution. An impartial audit can be guaranteed in no other way. In some of the institutions surveyed the audit has been made by officers of the institution, or by members or com-

mittees of the board of control. While there is no evidence that this was done in order to cover up financial and accounting errors, it must be borne in mind that the audit fails entirely of its purpose unless it is made by a completely disinterested party.

Summary

Financial considerations are of paramount importance in every institution of higher education. An adequate accounting system is one of the basic requirements for proper financial control. In many of the institutions surveyed, the accounting systems do not clearly distinguish between the strictly educational functions of the college and those activities, such as the maintenance of dormitories, dining-halls, bookstores, etc., which may be denominated supplementary business activities. Separation of the accounts on this basis enables the administration to see that these supplementary business activities pay their own way and do not become a charge against the institutional budget. Recommendations are made regarding a code system for accounts which should improve this condition materially. A second criticism of the present accounting systems of many of the institutions surveyed is the failure to carry capital accounts correctly. The recommendation is made that capital accounts show the actual record of gifts, endowments, and all other receipts and their use. Appraisal values should be carried only on memorandum account. A third criticism of the present accounting systems is the failure to handle correctly the income from scholarships.

A sound budgetary system is absolutely essential to proper financial control. Recommendations are made in some detail regarding the budgeting procedure which would be deemed satisfactory. It is important, after the budget system is installed, that no expenditures be made which are not authorized, either in the original budget, or in a revision of this original budget, made by the board of trustees.

The financial accounts should be audited annually. The audit should be complete, and should be made by a competent accountant who is entirely disinterested in the institution.

CHAPTER XI

COST STUDIES

Financial accounts are kept for two purposes. In the first place they are necessary to assure all who are concerned that funds are being properly safeguarded and are being used for the purpose for which intended without diversion to other ends, particularly the personal benefit of those who are responsible for the management of the funds. In the second place, financial records are necessary in order to administer most wisely the control of the institution. To a large extent questions of policy must be decided in the light of financial considerations. It therefore follows that the accounting system must be so organized as to yield the necessary information for the administrative control of the institution.

Many colleges fail to realize this second purpose of the financial records. Their accounting systems are set up to care adequately for the safeguarding of funds, but there has been little thought of deriving from these accounts information of value for administrative control. It is the purpose of this chapter to indicate certain types of valuable information which can be drawn from a well constructed accounting system, and to show how this information can be used in administering the college.

One of the first questions that arises is that of whether the accounting is to be on a cash disbursements or on a true expenditure basis. The difference between these two bases of accounting may be illustrated by the situation in which an institution purchases some item of expendable supply, let us say chalk. On the disbursements method of accounting, when the invoice for the chalk is received and check is issued in payment, the amount of the check appears immediately on the books as a disbursement. If the accounting is on an expenditure basis, the outlay for this chalk would not appear as an expenditure until the chalk is used up. If at the end of the fiscal period one-half the supply of chalk were still on hand, it

is evident that the "costs" for this item, as figured on the two bases, would be different. Similarly it sometimes happens that goods are received and some use made of them before payment is made. In such case the amount used up would appear as an expenditure, but not as a disbursement.

The same question is involved in accounting for income. The income accounting may be either on the cash receipts or on the accrual basis. If on the cash receipts basis, only such items as affect the daily cash balance are entered as receipts. If on the accrual basis, an accounting is also made for items of income which have accrued but have not been received. An example would be the portion of interest which has accrued on securities since the last interest payment.

It is usual in commercial accounting to have the books set up to yield true expenditures as well as cash disbursements. In college accounting very rarely are the books set up to show true expenditures. College business officers advance two reasons why the cash disbursements method should be used in their accounting. In the first place, it can readily be seen that the calculation of true expenditures involves a somewhat more complex system of accounting, and a considerable increase in clerical labor. The additional labor is necessitated by the taking of inventories and the increased complexity of the closing of the books. In the second place, it is argued that inventories, outstanding accounts, and accruals, generally run about the same from year to year; to take them into account would probably not introduce any significant change from the figures derived by the cash disbursements method. It should be noted that this last point is not based upon a scientific study of the constancy of inventory values and accruals, but is a matter of opinion only.

From a technical standpoint, one should not use the word "cost" unless the figures are on a true expenditure basis. If it may be assumed that disbursements and expenditures are equal, then the word "cost" might be used in connection with figures that are derived from disbursements. Throughout the remainder of this study it has been assumed that expenditures

are approximately equal to disbursements and the word "cost" is used under this assumption. In order to avoid confusion, the word "expenditures" is also used, although for the data on which the study is based the word "disbursements" would probably be more accurate.

Distribution of Educational Expenditures According to Function

A useful and helpful method of analysis of educational expenditures is to classify by function. Three functions are usually set up in making such a classification: (1) instruction, (2) administration, and (3) operation and maintenance. Under instruction are put expenses of the dean's office, all salaries of instructors, expenditure for instructional supplies, apparatus, equipment and library. Under administration are classified all salaries for administration, clerical help, office expenses and supplies, postage, printing, etc. Under operation and maintenance are put salaries of janitors, groundkeepers, watchmen, and other workmen, fuel, light, water, repairs on buildings, and all other expenditures of this character.

It will be noted that only educational expenditures are subject to this analysis. This leaves out of consideration expenditures for the non-educational service of the institution, such as promotion, operation of supplementary business activities, competitive athletics, etc.

Data are presented in Table 59 showing the distribution of educational expenditures according to function in ten colleges.

An examination of Table 59 shows that the percentage of total educational expenditures for the ten colleges going to instruction is 67.19. Of the remaining 32.81 per cent of this combined budget, 19.45 per cent is for administration and 13.36 per cent for operation and maintenance of the physical plant.

Data which the writers have tabulated for some forty institutions, accredited either by the North Central Association of Colleges and Secondary Schools or the Association of Colleges and Secondary Schools of the Southern States show that these accredited institutions have a combined average of about 65

per cent of their total educational expenditures going for instructional purposes. However, many of the most effective of these institutions have approximately 70 per cent of their total educational expenditures devoted to instruction and some have even a slightly higher per cent.

TABLE 59. PER CENT OF EDUCATIONAL EXPENDITURE FOR EACH FUNCTION IN TEN COLLEGES

INSTITUTION	PER CENT	PER CENT	PER CENT	YEAR
	FOR	FOR	FOR OPERATION AND MAINTENANCE	
	INSTRUCTION	ADMINISTRATION		
Spokane University	55.87	33.81	10.35	1926-27
Culver-Stockton College	60.34	21.28	18.38	1924-25
William Woods College	63.89	24.62	11.49	1925-26
Cotner College	64.63	21.01	14.36	1925-26
Atlantic Christian College	65.32	21.62	13.06	1924-25
Bethany College	66.89	15.27	17.84	1925-26
Transylvania College	67.69	15.70	16.61	1924-25
California Christian	69.33	26.89	3.78	1926-27
Lynchburg College	69.46	21.58	8.96	1924-25
Phillips University	77.38	12.89	9.73	1924-25
Total	67.19	19.45	13.36	

The optimum per cent of educational expenditures to be devoted to instructional purposes is a matter of some debate. The writers, through the examination of the data for this rather large number of institutions, together with some check-up as to the relative effectiveness of the various colleges, have been led to the opinion that a figure of 70 per cent should be set as the most desirable proportion of educational expenditures to be devoted to instruction. The situation indicated by any serious falling below this optimum per cent is usually a wasteful administration, this function absorbing some of the funds which should be spent for instruction. Too high a per cent of total expenditures going for instruction may also be unwise, particularly if it means that the function of administration is not being maintained effectively.

The figure of 70 per cent of total expenditures for instruction is not set up as an absolute standard to be attained by all institutions. Many circumstances can arise to excuse a de-

parture from this standard on the part of an individual institution. The geographical location is an important factor conditioning the expense of operation and maintenance. Note, for example, in Table 59, the low per cent devoted to this function in California Christian College, located at Los Angeles. Obviously the per cent devoted to instruction will be affected by any special circumstances affecting the per cent used for operation or administration. The standard of 70 per cent for instruction is set up here more as a criterion, departure from which should be fully justified by each college which does not meet it.

Unit Costs

Information concerning the total expenditure of a college is not particularly enlightening, unless the size of the institution be taken into account. Such a procedure involves the expressing of expenditure in terms of some comparable unit. The unit usually used is "the student," and costs per student are found by dividing the expenditures by the annual carrying load. Any one of several expenditure figures may be used as the base of the cost study, depending upon what information is desired. Those most frequently used are: (1) current expenditure for all educational purposes; (2) current expenditure for instructional salaries; (3) current expenditure for all instructional purposes; (4) total current expenditures; (5) total cost including depreciation. For comparative purposes, the costs are then expressed as "cost per student for all educational purposes," "cost per student for instructional salaries," "cost per student for instructional purposes," "total current cost per student," and "total cost per student."

Table 60, on page 224, shows cost per student for educational purposes for thirteen colleges.

Table 60 shows a rather striking range in the costs per student for educational purposes among the thirteen institutions represented. Great care must be taken, however, in comparing costs between institutions. Strictly speaking, costs are comparable only between institutions of approximately the

same size offering the same grade of work. It should be obvious that a college which attempts to do a high grade piece of work, other things being equal, will have a higher cost per student than a college doing inferior work. Within certain limits the cost per student thus becomes an index of the quality of work done in the college.

TABLE 60. PER CAPITA CURRENT EXPENSE FOR EDUCATIONAL PURPOSES AT THIRTEEN COLLEGES

INSTITUTION	YEAR	EXPENDITURES FOR EDUCATIONAL PURPOSES ¹	COLLEGE ENROL- MENTS ²	COST PER STUDENT
Phillips University	1925-26	\$101,477.82	581	\$174
Transylvania College	1924-25	65,723.00	310	212
Atlantic Christian College	1924-25	30,643.51	137	223
Cotner College	1925-26	64,065.50	277	231
Christian College	1925-26	54,284.27	232	234
Spokane University	1926-27	26,504.71	102	260
Lynchburg College	1924-25	54,650.64	207	264
California Christian College	1926-27	45,661.74	172	265
Hiram College	1923-24	111,325.55	387	288
William Woods College	1925-26	54,886.72	182	301
Culver-Stockton College	1924-25	79,816.09	245	326
Eureka College	1924-25	114,600.00	300	382
Bethany College	1925-26	129,527.00	290	447
Total		\$933,166.55	3422	\$273

¹The expenditure for educational purposes as classified in this table includes: (1) Administration and General Expenses, (2) Operation and Maintenance of Physical Plant, and (3) Instructional Expenditures. Expenditures for interest and annuities, promotion and miscellaneous items such as street improvements, real estate upkeeps, etc., are not classified as expenditures for educational purposes. When Fine Arts are carried on a separate budget, the figure listed in the above table for Educational Purposes includes the percentage of total Fine Arts Expenditure equivalent to the percentage of all fine arts students who are also regularly enrolled college students.

²The data for college enrolment represent the annual carrying loads of the respective institutions. The annual carrying load of an institution represents the average enrolment for the two semesters (or three terms) of the regular session, plus the summer session enrolment reduced to a basis of thirty-six weeks. Special and fine arts students not regularly enrolled in college courses are not included in the annual carrying load, but the cost of providing training for these students, also, is not included.

The size of the institution affects markedly the cost per student, even though the quality of work remains the same. Other things being equal, the smaller the enrolment, the higher the cost per student. This relation seems to hold until an enrolment of approximately 750 is reached, after which it seems that any further increase in student body is not accompanied by a

lower cost per student. The relation of size of enrolment to cost per student is illustrated by data collected by the writers from 32 colleges accredited either by the North Central Association of Colleges and Secondary Schools, or by the Association of Colleges and Secondary Schools of the Southern States. These data, which are for the academic year of 1925-26, are shown in Figure 17.

FIG. 17. EDUCATIONAL EXPENDITURES PER STUDENT IN 32 ACCREDITED COLLEGES, CLASSIFIED ACCORDING TO ENROLMENT, FOR 1925-26

Average of whole
group of 32 colleges: \$266

Average of 8 colleges
with fewer than 350
students enrolled: \$369

Average of 11 colleges
with enrolments rang-
ing from 350 to 500: \$263

Average of 8 colleges
with enrolments rang-
ing from 501 to 1000: \$258

Average of 5 colleges
with enrolments of
more than 1000: \$243

It should be apparent from these data that costs per student must be used cautiously for comparative purposes among institutions. Certainly the size of the institution for which comparisons are being made must be taken into account as well as the type of program it is attempting to offer.

While costs per student have a limited value for purposes of comparison among institutions, they are not at all satisfactory for comparisons within a given college. Another unit

which the writers have found valuable for studies among departments, instructors, and courses of a college, is a student-credit-hour unit. The student-credit-hour unit may be used with any one of the several bases, such as instructional salary expenditures, current expenditures for educational purposes, and total cost (current expenditures plus depreciation), and the various unit costs then become "instructional salary costs per student-credit-hour," "current expenditures per student-credit-hour," and "total cost per student-credit-hour."

These unit costs may then be worked out for each separate course offered in the college, for each instructor, for each department, for groups of departments, and for any other category which seems desirable. In somewhat fuller illustration of the method used and the results which may be obtained, data are given for one institution showing the computation of student-credit-hour units.

The technique employed in setting up student-credit-hour costs was as follows: The teaching load of each course offered in the institution was first measured upon the basis of student-hour and teaching-hour in the manner previously described. In order to find the salary cost of each course, the percentage of the total salary cost of the instructor by whom the course was offered, corresponding with the percentage of the instructor's total teaching load allocated to that particular course, was charged to the course. "Salary" was considered to be the salary of the instructor plus salaries of all assistants employed for his courses. This procedure was followed for every course offered in the college. The student-credit-hours produced by each course were then computed by multiplying the enrolment in each course by the number of credit hours it carried. The salary cost of each course was then divided by the number of student-credit-hours the course produced. This gives the salary cost of each course in terms of student-credit-hours. Similarly, to obtain the salary cost for student-credit-hours by departments, the total salary cost of each department was divided by the number of student-credit-hours earned in the department.

Table 61, which follows, shows the instructional salary cost per student-credit-hour for each of the courses offered in the institution from which illustrative data are taken, together with the enrolment of each course.

TABLE 61. SALARY COST PER STUDENT-CREDIT-HOUR BY COURSES, FIRST SEMESTER, 1925-26

COURSE	SALARY COST PER STUDENT-CREDIT-HOUR	ENROLMENT
English 11 (Sec. 1)	\$2.39	37
English 11 (Sec. 3)	2.39	37
English 11 (Sec. 2)	2.47	33
Old Testament 11 (Sec. 1)	2.74	47
Old Testament 11 (Sec. 2)	2.92	39
French 11 (Sec. 2)	2.98	21
Psychology 31 (Sec. 2)	3.39	38
Spanish 11	3.63	28
Psychology 31 (Sec. 1)	3.81	27
Chemistry 11	4.17	59
French 11 (Sec. 1)	4.31	30
History 33 (Sec. 2)	4.32	26
History 29	4.59	31
Psychology 51	4.75	23
History 33 (Sec. 1)	5.02	18
Biology 11	5.27	66
German 11	5.49	11
Spanish 31	5.49	11
Sociology 53	5.53	21
Philosophy 57	5.58	17
Sociology 51	5.79	19
French 31 (Sec. 2)	5.85	15
English 31	5.92	20
Chemistry 13	6.08	20
Rel. Education 41	6.08	17
Mathematics 11 (Sec. 2)	6.22	23
Education 41	6.38	36
English 57	6.41	17
Old Testament 35	6.45	12
English 45	6.59	16
English 73	6.83	15
History 11	6.87	24
French 31 (Sec. 1)	7.02	11
Religious Education 55	7.03	13
Sociology 57	7.03	13
New Testament 73	7.14	14

TABLE 61—CONTINUED

COURSE	SALARY COST PER STUDENT-CREDIT-HOUR	ENROLMENT
French 61	\$ 7.20	15
Education 51	7.38	24
English 77	7.38	13
Library Science 21	7.50	8
Biology 35	8.14	9
English 33	8.55	20
History 51	8.63	15
Biology 31	8.79	8
New Testament 79	8.93	16
Chemistry 61	8.99	11
Physics 31	9.01	13
Economics 53	9.14	12
German 31	9.19	5
Biology 27	9.46	12
History 57	9.81	8
Biology 37	10.05	7
Chemistry 59	10.34	5
Greek 11	10.41	13
History 71	10.78	7
New Testament 77	10.80	10
Greek 41	11.14	11
Homiletics 63	11.33	9
Home Economics 11	11.50	12
Chemistry 53	12.02	7
English 35	12.04	5
Education 71	12.71	8
History 75	13.00	7
Mathematics 11 (Sec. 1)	13.46	11
Home Economics 57	13.51	8
Economics 71	13.71	6
Psychology 53	13.71	7
Greek 81	14.42	7
Home Economics 33	14.73	4
English 53	14.92	4
Mathematics 37	15.31	8
Latin 11	15.37	8
Political Science 77	15.40	5
Homiletics 61	15.75	5
Agriculture 33	16.13	5
Education 81	16.19	6
Latin 31	16.28	7
Chemistry 41	16.57	6
Geology 31	16.68	5
Home Economics 63	17.60	5
History 79	18.37	4

TABLE 61—CONTINUED

COURSE	SALARY COST PER STUDENT-CREDIT-HOUR	ENROLMENT
Latin 15	\$19.10	5
Latin 33	19.20	5
Mathematics 33	19.30	5
Home Economics 59	19.59	3
Home Economics 53	19.70	4
Old Testament 85	20.00	3
Home Economics 31	21.81	6
History 101	22.16	3
Music 31	22.57	5
Physics 51	24.53	3
Latin 53	25.50	3
Education 75	27.87	3
Old Testament 61	29.25	2
Home Economics 35	29.42	2
Home Economics 61	29.51	2
Latin 13	34.25	2
Music 11	35.20	2
Music 55	35.20	2
Agriculture 31	44.12	1
Home Economics 51	48.18	1
Biology 39	55.28	1
Mathematics 15	82.50	1
Average for the College	\$ 7.10	

Table 61 shows that on the average it requires an expenditure of \$7.10 in salary to produce one hour of credit for one student in this college. A wide range of costs is noted among the various courses, from \$2.39 for a credit in English 11 up to \$82.50 for a credit in Mathematics 15.

When costs per student-credit-hour are computed by departments, it is of value to compute not only the salary cost, but current cost and total cost as well. The current cost of a department is obtained by finding the sum of the salary cost, other direct costs, and allocated overhead costs of the department. The overhead expenditure, which is allocated on a basis of total student-hours, includes all items listed under budgetary headings, "Administration and General Expense," and "Operation and Maintenance of the Physical Plant." Ex-

penditures for the library under the budgetary heading "Instructional" are also included as overhead. Expenditures for "Specially Designated Objects not Strictly Educational" are not included in this overhead. To find the student-credit-hour current cost for a department, the current cost of the department is divided by the number of student-credit-hours in the department.

Total cost is the same as current cost, except that a figure for depreciation is added. The depreciation figure is allocated to departments on the same basis as other overhead charges.

TABLE 62. SALARY COST, CURRENT COST, AND TOTAL COST PER STUDENT-CREDIT-HOUR FOR FIRST SEMESTER, 1925-26

DEPARTMENT	SALARY COST PER STUDENT- CREDIT-HOUR	CURRENT COST PER STUDENT- CREDIT-HOUR	TOTAL COST PER STUDENT- CREDIT-HOUR
Old Testament	\$ 3.82	\$ 9.16	\$10.33
Spanish	4.16	9.53	10.70
English	4.62	10.01	11.18
Psychology	4.59	10.14	11.31
French	4.93	10.34	11.51
Philosophy	5.61	10.90	12.07
Sociology	5.89	11.30	12.47
Religious Education	6.42	11.73	12.90
German	6.65	12.04	13.21
History	6.95	12.31	13.48
Library Science	7.50	12.59	13.76
New Testament	8.59	13.97	15.14
Education	8.81	14.29	15.46
Biology	6.37	14.60	15.77
Homiletics	12.91	14.69	15.84
Chemistry	6.18	15.09	16.26
Economics	10.66	16.14	17.31
Greek	11.41	16.89	18.06
Mathematics	11.61	17.17	18.34
Political Science	15.40	20.33	21.50
Physics	11.42	21.08	22.25
Geology	16.68	21.62	22.78
Latin	18.25	23.38	24.55
Home Economics	17.52	25.29	26.46
Agriculture	20.79	26.44	27.61
Music	28.16	33.66	34.83
Average for the College	\$ 7.10	\$13.17	\$14.34

Total cost per student-credit-hour is then computed by dividing the total cost figure allocated to a department or instructor by the number of student-credit-hours produced by that department or instructor.

Table 62 shows salary cost, current cost, and total cost per student-credit-hour by departments in the institution for which data are being given.

Table 62 shows that the salary costs per student-credit-hour, when computed by departments in this institution, range from \$3.82 in Old Testament to \$28.16 in Music; current costs per student-credit-hour range from \$9.16 to \$33.66, the same departments being high and low respectively; and total costs per student-credit-hour range from \$10.33 to \$34.83.

In order to provide a program of studies academically sound, it is necessary in all colleges and universities to offer some courses and maintain some departments which are much more expensive per student-credit-hour than other courses offered, or than the average for the institution. No course or department should be condemned upon the basis of cost alone. However, the fact that a course or a department continues through a period of years to be expensive is a sign that a careful study should be made to find out whether its contribution to the entire educational program is sufficiently great to warrant its cost.

In some departments, principally the sciences, extra fees are charged for laboratory courses. When costs are used for comparison between departments, it is perhaps fair to deduct from the costs per student-credit-hour in these departments the

TABLE 63. REDUCTION IN CURRENT COST PER STUDENT-CREDIT-HOUR DUE TO LABORATORY FEES PAID FOR LABORATORY SCIENCES

DEPARTMENT	CURRENT COST PER STUDENT- CREDIT-HOUR	CURRENT COST PER STUDENT-CREDIT- HOUR LESS FEES	FEES PAID PER STUDENT- CREDIT-HOUR
Chemistry	\$15.09	\$12.88	\$2.21
Biology	14.60	13.67	.93
Physics	21.08	20.22	.86
Geology	21.62	20.95	.67
Home Economics	25.29	24.69	.60
Agriculture	26.44	26.11	.33

extra fees paid per student-credit-hour. Table 63, on page 231, shows this computation for six science departments in the institution for which data are being given.

TABLE 64. SALARY COST, CURRENT COST, AND TOTAL COST PER STUDENT-CREDIT-HOUR FOR FIRST SEMESTER 1925-26, BY INSTRUCTORS

INSTRUCTOR	SALARY COST PER STUDENT- CREDIT-HOUR	CURRENT COST PER STUDENT- CREDIT-HOUR	TOTAL COST PER STUDENT- CREDIT-HOUR
1	\$ 2.97	\$ 8.26	\$ 9.43
2	3.12	8.43	9.60
3	3.82	9.17	10.33
4	4.88	10.15	11.32
5	4.74	10.18	11.35
6	5.54	10.84	12.01
7	5.56	10.89	12.06
8	6.12	11.44	12.61
9	6.50	11.83	13.00
10 ¹	7.14	12.48	13.65
11 ¹	7.49	12.80	13.97
12	5.96	14.02	15.19
13	8.80	14.29	15.46
14	5.27	14.41	15.58
15	9.29	14.64	15.81
16 ¹	9.45	14.76	15.93
17	8.58	15.76	16.93
18	10.97	16.21	17.38
19 ¹	7.86	16.38	17.55
20	11.62	16.98	18.15
21	9.60	18.34	19.51
22	14.37	22.03	23.20
23 ¹	17.40	22.56	23.73
24	18.26	23.38	24.55
25 ¹	20.79	26.44	27.61
26	22.00	29.41	30.58
27 ¹	28.16	33.50	34.67
Average for College	\$ 7.10	\$13.17	\$14.34

¹In the computations of these costs, the following allocations of salaries of instructors not giving all their time to teaching were made:

Number 10 (President)	9 per cent total to instruction
Number 11	20 per cent total to instruction
Number 16	20 per cent total to instruction
Number 19 (Dean)	50 per cent total to instruction
Number 23	75 per cent total to instruction
Number 25	25 per cent total to instruction
Number 27	20 per cent total to instruction

Table 64, on page 232, shows salary cost, current cost, and total cost per student-credit-hour by instructors for the institution under consideration.

Again a rather striking range in costs per student-credit-hour is found among the instructors of this institution.

Three principal factors affect the cost per student-credit-hour. The first is the salary of the instructor. Other things being equal, the instructor with the lowest salary will be producing credits at the lowest cost. The second factor is the teaching-hour load carried by the instructor, since, other things being equal, the greater the load, the lower the cost per unit. The third factor is the number of students enrolled. This, of course, conditions the credit-hour production of a course.

Costs per student-credit-hour are valuable not only for comparison among the departments, courses, and instructors within a single institution, but also for comparisons among institutions. Table 65, which follows, shows the total cost, current cost, salary cost, current cost for other than salaries, and depreciation cost per student-credit-hour for ten institutions.

TABLE 65. COMPARATIVE COSTS PER STUDENT-CREDIT-HOUR IN TEN COLLEGES

INSTITUTION	COST PER STUDENT-CREDIT-HOUR					YEAR
	TOTAL (SUM OF COLUMNS 2 AND 5)	CURRENT (SUM OF COLUMNS 3 AND 4)	SALARY COST	CURRENT OTHER THAN SALARIES	DEPRECIATION	
	(1)	(2)	(3)	(4)	(5)	
Phillips	\$ 4.60	\$ 4.24	\$2.59	\$1.65	\$0.36	1925-26
Transylvania	6.44	5.92	3.67	2.25	.52	1924-25
Lynchburg	6.90	6.40	3.88	2.52	.50	1924-25
William Woods	7.65	6.73	3.43	3.30	.92	1925-26
Spokane	7.73	6.48	3.38	3.10	1.25	1926-27
Eureka	9.58	8.80	5.02	3.78	.78	1924-25
Atlantic Christian	9.60	8.82	5.00	3.82	.78	1924-25
California Christian	9.85	8.85	5.50	3.35	1.00	1926-27
Culver-Stockton	10.31	9.49	5.25	4.24	.82	1924-25
Bethany	14.34	13.17	7.10	6.07	1.17	1925-26
Median Institution	\$ 8.66	\$ 7.77	\$4.23	\$3.33	\$0.80	

Again in Table 65 a wide range is noted in the various costs per student-credit-hour among the ten institutions.

Table 66, on page 235, shows salary costs per student-credit-hour separately by departments for several colleges and universities, together with the salary cost for each department in the median institution.

The subject of unit costs should not be dismissed without some cautions as to the uses and interpretations of such data. Attention has already been drawn to the fact that costs per student, based upon annual carrying load, need to be interpreted with regard to the size of the institution for which data are being studied. When this factor is properly accounted for, a given cost per student may be used in two different ways: (1) as a measure of the quality of the educational offering; (2) as a measure of the efficiency of the administration of the college. Clearly these two measures work in exactly opposite directions. In an institution with a higher than average cost per student, it is impossible, from this measure alone, to judge whether the educational offering is *higher* in quality than the average, or the efficiency *lower* than the average. If, however, some other objective measure or measures of the quality of the educational offering are available, the cost per student may become an index of efficiency; and vice versa, if other objective measures of administrative efficiency are available, the cost per student may be interpreted into an index of quality of educational offering.

Take, for illustration, an institution which has a higher than average cost per student, which also has a median size of class equal to or above the average, with very few small classes and very few large classes, and a satisfactory per cent of total expenditures devoted to instruction. The measures of size of classes and per cent of funds devoted to instruction become objective measures of efficiency, and it might thus be possible, in this instance, to interpret the higher than average cost per student as a higher than average quality of educational offering, since the institution is judged satisfactory on the basis of efficiency.

The other unit for the computation of costs, that has been

TABLE 66. SALARY COST PER STUDENT-CREDIT-HOUR FOR VARIOUS SUBJECTS IN TWELVE COLLEGES

NAME OF INSTITUTION AND YEAR OF DATA	SALARY COST PER STUDENT-CREDIT-HOUR IN VARIOUS SUBJECTS											
	BIOLOGY	MODERN LANGUAGE	ENGLISH	HISTORY	SOCIAL SCIENCE	BIBLE AND RELIGIOUS EDUCATION	PHILOSOPHY AND EDUCATION	MATHEMATICS	HOME ECONOMICS	CHEMISTRY AND PHYSICS	ANCIENT LANGUAGE	
Atlantic Christian College (1924-25)	\$3.27	\$5.08	\$3.64	\$4.04	\$ 4.32	\$ 5.10	\$8.14	\$ 5.92	\$ *	\$17.84	\$ *	
Bethany College (1925-26)	6.37	5.25	4.62	6.95	10.65	6.27	6.33	11.61	17.52	8.80	14.83	
California Christian (1926-27)	*	*	4.48	2.09	4.48	9.86	5.50	*	*	*	18.51	
Cotner College (1925-26)	2.67	3.08	1.83	4.54	3.83	4.72	3.22	5.12	7.47	8.69	6.46	
Culver-Stockton College (1924-25)	3.11	4.69	5.14	3.62	3.34	10.52	5.48	10.29	9.01	9.29	15.00	
Eureka College (1924-25)	4.24	3.49	4.01	4.46	3.56	4.18	3.37	6.36	12.06	7.93	14.52	
Hiram College (1924-25)	3.14	5.40	4.61	5.73	6.00	5.44	5.94	7.01	*	8.15	9.93	
Lynchburg College (1924-25)	6.26	3.24	3.53	3.88	4.58	3.98	3.66	4.82	6.14	2.51	4.18	
Phillips University (1925-26)	2.48	3.00	1.65	2.32	2.69	3.49	4.07	2.38	6.77	2.40	2.88	
Spokane University (1926-27)	3.83	3.08	4.16	+	5.46	4.52	7.08	6.99	*	6.99	*	
Transylvania College (1924-25)	3.43	6.54	3.37	3.14	3.79	*	2.69	3.43	*	4.43	7.37	
William Woods College (1925-26)	3.67	3.62	2.51	5.31	4.61	2.17	2.39	7.50	7.09	2.90	11.68	
Median Institution	\$3.43	\$3.62	\$3.83	\$4.04	\$ 4.40	\$ 4.72	\$4.77	\$ 6.36	\$ 7.47	\$ 7.93	\$10.80	

*Department did not exist in institution concerned.

+Included in Social Science.

used in this report, namely the student-credit-hour, must also be interpreted cautiously. It has already been pointed out that this unit cost is affected principally by three factors, the instructor's salary, his teaching load, and the enrolments in his classes. It is clearly impossible to bring all courses, or all departments or all instructors to a dead level of cost per student-credit-hour.

In general, advanced classes will be smaller than elementary classes, and elective classes will be smaller than required classes. Thus a given cost per student-credit-hour for a certain course should be interpreted first as to whether it is a freshman course, a senior course, or a graduate course, and secondly as to whether it is a course required for graduation, or an elective course open to students with certain special interests. Some departments offer work primarily at the junior college level, while others offer a program principally at the senior college level. The low cost of the modern language courses shown in Table 66 may be partially explained on this basis. The second factor, that of being a graduation requirement, also operates to keep modern languages at a low unit cost, since most of these institutions require foreign language for graduation.

It is generally recognized also that certain types of subject matter can be handled effectively in large classes, while other subjects must be given in relatively small classes. Furthermore, it is generally recognized that certain types of subject matter constitute a heavier teaching load, hour for hour, than do other subjects. Both of these observations, while generally accepted to a certain extent, need a careful scientific study before being accepted as absolutely proved. As illustration of the type of a subject which must be handled, according to current thought, in small classes, English composition may be selected. The same subject might also serve to illustrate a subject throwing a heavy load on an instructor per teaching hour, due to the large amount of paper work involved. Perhaps a better illustration of the recognition of a heavy teaching load inherent in the nature of the subject matter would be the

rather universally accepted principle of giving a lighter load in teaching hours in Schools of Law.

Table 66 showed that in general the laboratory sciences of chemistry, physics, and home economics have high costs per student-credit-hour. The biological sciences, however, are at the extreme low end of the scale of costs by subjects. Data are not available upon which a final conclusion may be made as to the possibility of teaching chemistry, physics, and home economics in any less expensive way, nor does there appear to be any objective evidence of a contribution of these sciences to the curriculum sufficient to warrant their relatively high cost. As a matter of fact, the high cost in home economics is due largely to three factors: (1) the light load of teaching hours which most home economics instructors insist upon carrying; (2) the fact that the courses appeal to only one-half of the student body (the young women); and (3) the heavy specialization of subject matter (equivalent to a double major) required to qualify teachers of home economics under the Smith-Hughes law.

It is generally recognized also that higher salaries are necessary in some departments than in others in order to attract equally well qualified instructors. A factor of this kind will obviously affect the cost per student-credit-hour by departments. When costs are compared among instructors, it is clear that, other things being equal, the instructor having the higher salary will have the higher cost per student-credit-hour. The tendency is usually to assign the higher salaried instructors to the more advanced classes, and thus the two factors combine to produce a higher unit cost. Certainly it would be a mistake to attempt to equalize costs by assigning the higher salaried instructors exclusively to elementary classes of large enrolment, while lower salaried instructors (with correspondingly lower qualifications) are assigned to the smaller advanced classes. Such an attempt would be a serious misuse of unit costs. Similarly an attempt to adjust instructors' salaries to take into account production of student-credit-hours and thus equalize salary cost per student-credit-hour would be a mistake.

In general, any attempt to equalize costs per student-credit-hour must take into account the fact that all credit-hours are probably not of equal value, either to the educational objectives of the institution, or the welfare of the individual student. Such an analysis goes immediately down to the bedrock of the educational philosophy on which the administration of the institution is based. It ought always to be possible for an administration to justify a certain amount of inequality in costs between subjects on the basis of its own philosophical evaluation of the relative worth of the subjects.

Such are some of the possibilities and limitations of the use of a unit cost, such as the student-credit-hour. Particularly at the time of the planning of the budget such a measure becomes useful. Heads of departments should be supplied information concerning the student-credit-hour costs of courses in their own department, of the instructors in their department, and of the department as a whole, together with comparative information concerning costs in other departments of the college.

Expansions or retrenchments in the future program can then be justified to some extent on the basis of what will happen to the cost per student-credit-hour. Departments with a cost already considerably above the average for the institution as a whole should be called upon to justify very completely any request for an expansion. When confronted with unit cost figures for the whole institution, department heads are able to plan their own offerings with reference to the needs of the institution as a whole, rather than from the selfish and isolated viewpoint of the welfare of a single department.

Summary

Financial records are of value not only for the purpose of safeguarding the funds of the institution, but also for the purpose of yielding valuable administrative information. A fundamental question involves a decision as to whether the accounting shall be on a cash basis or on an accrual basis. Certain types of valuable analyses of expenditures are suggested.

One helpful sort of analysis of educational expenditures in

colleges is the classification by function. Such an analysis of certain institutions shows that approximately 67 per cent of the expenditures go directly into instructional services, approximately 20 per cent go for administration, and the remaining 13 per cent go for operation and maintenance. The suggestion is made that the optimum proportion of total expenditures to be devoted to instructional purposes should be 70 per cent.

For the purpose of comparison either among institutions, or among the departments, instructors, and courses of a given institution, it is necessary to reduce expenditures to some sort of a unit basis. One of the frequently employed units for expressing costs is that of expenditure per student, obtained by dividing the number of students into the amount of expenditures. Interesting comparisons can be made among institutions by the use of this unit cost. Such comparisons need to be made carefully, however, taking into account the size of the institution, the quality of the educational offering, and the efficiency of the administration. In general, institutions with student enrolments below 750 show progressively higher unit costs as the enrolments become lower; above an enrolment of 750 an increase in number of students appears to have little effect on cost. After the effect of enrolment on costs is taken into account, the cost per student becomes an index of either quality of educational offering or efficiency of administration.

For purposes of comparison within the institution, perhaps the most valuable unit is the cost per student-credit-hour, which is the cost of producing one semester hour of credit for one student. This unit may then be divided into either salary expenditures, instructional expenditures, or total expenditures, as a measure of unit cost. Interesting comparisons can then be made in the costs of the various departments, instructors, and courses in the institution, and glaring inequalities can be revealed. Administrative attempts to equalize costs per student-credit-hour among subjects must be made cautiously, and in accordance with the institution's own philosophical evaluation of the relative worth of the subjects to the program which the institution is attempting to offer.

CHAPTER XII

THE EFFECTIVE USE OF FINANCIAL RESOURCES

The previous chapter, dealing with unit costs, has shown the wide variation in the costs per student among institutions. The suggestion has been made that a part of this variation is due to the varying efficiency of administration, while a part is due to the varying quality of instruction. The latter point involves the assumption that the quality of instruction is now not all that could be desired in some, perhaps all of the institutions. Two problems present themselves in this connection. The first is that of what the cost would be if the quality of the educational offering were all that could be desired, assuming the administration to be thoroughly efficient. The second is that of how an institution with limited funds may still be able to finance a reasonably satisfactory educational program. These two problems will be discussed in this chapter.

The Cost of Education in Effective Colleges

The problem of the cost of a thoroughly effective college may best be approached from the point of view of present educational costs. As a means of arriving at an estimate of the funds required for the maintenance of an effective college, data are herewith presented relating to the expenditures of a group of liberal-arts colleges during the academic year 1925-26. These data were obtained from thirty-two liberal-arts colleges and universities holding membership either with the North Central Association of Colleges and Secondary Schools or with the Association of Colleges and Secondary Schools of the Southern States. All of the facts upon which the estimates of cost are based were obtained by personal visits by one of the writers to the institutions.¹

¹The institutions from which data were obtained are:

Antioch	De Pauw	Hiram	Illinois Wesleyan
Bethany	Drake	Huron	Monmouth
Butler	Earlham	Illinois College	Oberlin
Carleton	Eureka	Illinois Woman's	Ohio Wesleyan
Center	Franklin	College	Phillips
Coe	Georgetown	Knox	Shurtleff
Concordia	Gustavus Adolphus	Macalester	St. Olaf
Culver-Stockton	Hamline	Millikin	Transylvania
			Wabash

The relationships existing among groups of institutions with respect to enrolments, educational expenditures per student, average salaries of instructors, and percentages that instructional salaries are of current expenditures are shown in Table 67.

TABLE 67. AVERAGE ENROLMENT, EXPENDITURE PER STUDENT, AVERAGE SALARY OF TEACHERS, AND PER CENT THAT EXPENDITURE FOR INSTRUCTIONAL SALARIES IS OF EDUCATIONAL EXPENDITURE FOR GROUPS OF INSTITUTIONS, 1925-1926

GROUP OF INSTITUTIONS CLASSIFIED ON THE BASIS OF ENROLMENT	AVERAGE ENROL- MENT ¹	EDUCA- TIONAL EXPENDI- TURE PER STUDENT	AVERAGE SALARY OF TEACHERS	PER CENT THAT INSTRUCTIONAL SALARIES IS OF EDUCATIONAL EXPENDITURE
Average for 32 Institu- tions	639	\$266	\$2464	58.7
Eight Institutions Hav- ing the Smallest Enrolments	279	\$369	\$2588	59.8
Sixteen Institutions Con- stituting the Middle Group	473	258	2213	57.9
Eight Institutions Hav- ing the Largest En- rolments	1329	249	2634	59.7

¹The enrolment figures represent the annual carrying loads of the institutions. The annual carrying load of an institution is the average enrolment for the two semesters or three terms of the regular session, plus the summer session enrolment reduced to a basis of thirty-six weeks.

Table 67 is read as follows: The eight accredited institutions having the smallest enrolments have an average enrolment of 279; the educational expenditure per student for this group is \$369; the average salary of faculty members in this group is \$2,588; and these institutions on the average devote 59.8 per cent of their educational expenditures to the payment of faculty salaries.

Table 67 shows that the current expenditure per student tends to be greater for the small institutions than for the larger ones. No correspondence is apparent between the size of institution and the average salary of faculty members, the largest institutions, in point of enrolment, paying the highest average salaries, the smallest institutions paying only slightly less, while the middle group with respect to enrolment pay lower salaries than either of the two extremes. The per cents that instruc-

tional salaries are of current educational expenditures do not vary significantly among institutions of different sizes.

The differences in educational expenditures per student among institutions of different sizes are marked, and the higher cost per student in the smaller institutions is particularly striking. The most important single factor responsible for these differences in current expenditure per student among institutions of different enrolments is the relatively large percentage of very small classes maintained for senior college students in the smaller institutions. There appears to be no way to avoid this situation. A small institution must have a relatively larger number of small classes than a large institution, if the offerings of the institutions are to be equally satisfactory.

There appears to be no good reason why institutions of all sizes should not purchase an equally high quality of instruction. An investigation of the training of the staff members of all of the thirty-two institutions leads to the conclusion that, irrespective of the size of the institution, a relatively larger number of well trained instructors, as well as a relatively larger number of staff members who have obtained national recognition in the fields in which they are engaged, are found upon the staffs of institutions paying the higher salaries than are found upon the staffs of the institutions paying the lower salaries.

Estimates of costs of education for effective colleges involve a decision as to what constitutes an effective college. This cannot be determined with scientific accuracy, since the term effective is relative. The degree to which an institution is effective in the performance of its tasks does not lend itself readily to measurement, since no measuring instruments have yet been devised which will measure some of the educational values of a college course. At present, an effective college can be defined only in terms of standards set up in a manner more or less arbitrary.

For the purpose of this report an effective college is defined as one meeting the following standards: (1) an average salary for faculty members high enough to attract men whose training, experience and teaching ability are thoroughly satisfactory for the work to which they are to be assigned; (2) a sufficient

number of rather high salaries for faculty members to attract to the institution men of national reputation in their own fields; (3) adequate provision for instructional apparatus and equipment for the type of work attempted; (4) thoroughly adequate library facilities to care for the program of studies that the college undertakes; (5) a physical plant adequate to handle satisfactorily the program attempted and the student body enrolled. These criteria reduce readily to two objective measures: first, the average and the range of faculty salaries; second, the expenditure per student for purposes other than faculty salaries.

In terms of such standards, the cost of education in effective colleges may be determined by an analysis of present costs, together with a study of the degree to which the present expenditures of institutions enable them to attain the standards suggested. The following tentative conclusions bearing upon the cost of education in effective institutions with enrolments of various numbers may be drawn from the data presented in the earlier sections of this report:

(1) Current educational expenditures per student vary greatly. However, there is a marked tendency for the cost per student to be greater in the small institutions than in the larger ones.

(2) The average salary required to obtain the services of staff members of equal instructional ability does not vary greatly for small and for larger institutions of the type included in this report.

(3) The per cent of current educational expenditure devoted to instructional salaries does not vary with the enrolment, averaging approximately 60 per cent for all of the groups of institutions studied.

Preparatory to estimating the cost of education for effective colleges, it becomes necessary, not only to give consideration to the conclusions listed above, but also to make a number of assumptions as a means of limiting the problem under discussion. The assumptions upon which the estimates given in this report are based are presented in the following paragraphs.

1. *Purpose of the College*

The college will be maintained primarily for the purpose of providing a suitable environment in which undergraduate students may obtain a liberal education. A liberal arts college will be maintained without affiliated graduate, technical or professional schools.

2. *Research Activities*

The extent to which members of the college community shall engage in research activities will be determined by the degree to which research is considered essential as a means of providing a suitable environment in which undergraduate students may obtain a liberal education. Research will not be maintained primarily with the end in view of making important contributions to knowledge; its primary purpose will be that of stimulation of the intellectual vitality of faculty members.

3. *Programs of Offerings*

The programs of offerings will be more limited for the small institutions than for the larger ones. However, it is assumed that the quality of instruction will be equal at institutions of different sizes. Since the offerings will be more limited in the small institution than in the larger one, the effective small college will be more selective than the larger college, from the point of view of the interests of the students concerned. Students whose needs cannot be met adequately in the small institution will be advised to attend college elsewhere.

4. *Relation Between Current Cost and Instructional Salary Cost*

Approximately 60 per cent of the current educational expenditure of the institutions represented in this report is expenditure for instructional salaries. The percentage of expenditure given to salaries does not appear to be affected either by the enrolment of an institution or by the cost per student. Therefore, it is assumed that 60 per cent of the current educational expenditure in effective colleges of all sizes will be expenditure for instructional salaries.

5. *Salaries of the Teaching Staff*

Since instructional salaries constitute the largest single item of expense for educational institutions, an estimate of the funds required for this purpose is basic in the computation of educational costs for effective colleges. Average salaries for the institutions studied range from \$1,969 to \$3,426. All of these institutions have some members on their staffs whose training is less than appears desirable for thoroughly effective colleges, although the staff of the institution having the highest average salary approaches the writers' conception of a well qualified staff for an effective college. The staff of this institution is not only better trained than that of any of the other institutions, but also has a larger percentage of men with national reputations in their respective fields. The average annual salary proposed for the members of the instructional staff of an effective college for the regular-year session is \$3,600. This average is proposed for institutions, irrespective of their size. An average salary of \$3,600 will permit a salary range of from \$1,800 to \$2,000 for the lowest salaried instructors, to \$6,000 or \$6,500 for a limited number of the most highly paid professors. The ratios of the number of staff members holding the higher ranks to the number holding the lower ranks will vary with the size of the college. The percentage of staff members with the rank of full professor will tend to be greater in the small institutions than in the larger ones.

6. *Retirement Provisions and Sabbatic Furloughs*

In institutions where provision is made for the retirement of the older staff members, or for sabbatic furloughs, the funds provided will be considered as deferred salary payments and the salary schedule will be arranged to permit a part of the salary funds to be used for retirement provisions and furloughs.

7. *Load of Teaching Staff*

Instructors will teach from nine to sixteen hours each week, the number of hours depending upon factors such as the size of classes, the subjects taught, the classification of students with

respect to the junior college or senior college divisions, and the time required for activities other than teaching in connection with the work of the college. For institutions with enrolments of 750 and over, an average teaching load of twelve hours each week will be expected. Since classes will tend to be smaller in the small institutions than in the larger ones, the average teaching load for staff members of the small institutions may be somewhat higher than that for the larger institutions, without resulting in a greater total service load. One and one-half hours of laboratory work will be considered as constituting a load equal to one hour of lecture or recitation.

8. Size of Teaching Staff

The ratio of students to teachers will vary for institutions according to the number of students enrolled. In colleges with enrolments of 750 and over, the ratio of students to teachers suggested as desirable is 15 to 1; in institutions of 300 students, the ratio for effective work probably should not exceed 10 to 1. These ratios correspond roughly to those which now prevail in a few of the better institutions included in this study. However, some of these institutions now have larger numbers of small classes than appear either necessary or desirable, with the result that the number of teaching hours of staff members often exceeds the numbers suggested here. It is believed that a careful analysis of curricula and class schedules of many institutions might result in the elimination of a number of the smaller classes; this would make possible an effective program with ratios of students to teachers as large as those suggested above.

Table 68 shows the number of staff members of each rank, and the average salary of such staff members, as proposed for effective colleges.

Table 68 should be read as follows: In a college with an enrolment of 750 students it is proposed that there should be 50 members of the teaching staff. The average salary of the entire group will be \$3,600. This staff will include 20 professors who will receive an average salary of \$5,000, 20 associates and

TABLE 68. NUMBER AND AVERAGE SALARY OF STAFF MEMBERS OF EACH RANK PROPOSED FOR EFFECTIVE COLLEGES

COLLEGE ENROL- MENT	ALL RANKS		PROFESSORS		ASSOCIATE AND ASSISTANT PROFESSORS		INSTRUCTORS	
	NO.	AVERAGE SALARY	NO.	AVERAGE SALARY	NO.	AVERAGE SALARY	NO.	AVERAGE SALARY
750	50	\$3,600	20	\$5,000	20	\$3,000	10	\$2,000
500	36	3,600	16	4,900	13	2,875	7	1,975
400	33	3,600	15	4,900	12	2,800	6	1,950
300	30	3,600	15	4,800	10	2,650	5	1,900

assistant professors who will receive an average salary of \$3,000, and ten instructors who will receive an average salary of \$2,000, etc.

The salaries suggested will make possible a scale of salaries ranging from \$4,000 to \$6,000 or \$6,500 for full professors, \$3,000 to \$4,000 for associate professors, \$2,400 to \$3,000 for assistant professors, and from \$1,800 to \$2,400 for instructors. Associate and assistant professors are grouped together in the table because a majority of the smaller institutions do not have both ranks.

Table 69 is based both upon the conclusions reached through the analysis of expenditures in the thirty-two institutions and upon the assumptions presented above. It shows the number of teachers, the ratio of students to teachers, the average salary of teachers, the current educational cost per teacher, the total current educational expense, and the current educational cost per student proposed for effective colleges of several sizes. The column representing current educational cost per teacher is de-

TABLE 69. NUMBER OF TEACHERS, RATIO OF STUDENTS TO TEACHERS, AVERAGE SALARY OF TEACHERS, CURRENT EDUCATIONAL COST PER TEACHER, TOTAL CURRENT EDUCATIONAL EXPENSE, AND CURRENT EDUCATIONAL COST PER STUDENT, PROPOSED FOR EFFECTIVE COLLEGES

ENROL- MENT	NUMBER OF TEACHERS	RATIO OF STUDENTS TO TEACHERS	AVERAGE SALARY OF TEACHERS	CURRENT ED- UCATIONAL COST PER TEACHER	TOTAL CUR- RENT EDU- CATIONAL EXPENSE	CURRENT EDUCATIONAL COST PER STUDENT
750	50	15.0	\$3,600	\$6,000	\$300,000	\$400
500	36	13.9	3,600	6,000	216,000	432
400	33	12.1	3,600	6,000	198,000	495
300	30	10.0	3,600	6,000	180,000	600

rived from the column representing average salaries of teachers, the average salaries being considered as amounting to 60 per cent of the current educational costs. It is assumed that institutions with enrolments in excess of 750 will have the same ratio of students to teachers, and, consequently, the same current educational cost per student, as institutions with enrolments of 750. Data obtained in a number of surveys made by the writers indicate that institutions with enrolments of 750 can be maintained at a cost per student no greater than that which is required for larger institutions.

It is to be understood that the figures here suggested as the current educational costs per student in effective colleges presume a thoroughly efficient administration. It might easily be possible for a college to have an educational cost per student of the amount suggested and still not be an effective college. The expenditure per student must not be advanced either by wasteful administration or through the multiplication of small classes, but rather by increased salary expenditures to attract well qualified men to the faculty, and adequate provision for plant and equipment. At the same time, the emphasis on faculty salaries should not be interpreted to mean the payment of higher salaries than are deserved by faculty members, when training, experience, and teaching ability are taken into account. Thus while the criteria are expressed in terms of dollars and cents, they finally relate to the qualifications of faculty members and the adequacy of plant and instructional equipment.

It should be remembered also that the criteria herein established refer to an institution which is unhampered by a limitation of funds with which to carry on the program it is attempting, and which has set out to make itself a thoroughly effective college.

The data relating to expenditures presented for the thirty-two colleges included in this report, as well as the cost figures proposed for effective colleges refer to current costs only. No charges have been included for depreciation on the educational buildings and equipment or for interest on the funds invested in plant and equipment. Few institutions make any attempt

to compute depreciation costs or interest on funds invested in grounds or educational buildings and equipment; consequently, the most useful figures for comparative purposes appear to be those representing current educational costs. However, from data obtained from the colleges in which surveys have been made, it is possible to approximate roughly costs for interest and depreciation.

In the State of Washington, the State Bureau of Inspection of Public Offices some years ago adopted a schedule of depreciation for all institutions.¹ Applying this schedule to the institutions represented in this study and assuming that the percentages of current expenditures chargeable to depreciation and to interest on plant investment will be the same for effective colleges as for the group of institutions for which data are available, the average costs for depreciation will range from \$40 per student in institutions of 750 students and over to \$60 per student in institutions of 300 students; the average costs per student for interest on funds invested in the educational plant will range from \$100 per student in institutions of 750 students and over, to \$150 per student in institutions of 300 students. The costs proposed for effective colleges, computed upon these bases, are shown in Table 70 below.

TABLE 70. ESTIMATED COSTS PER STUDENT FOR EFFECTIVE COLLEGES WITH VARIOUS ENROLMENTS

ENROLMENT	CURRENT COST	INTEREST ON PLANT INVESTMENTS	DEPRECIATION CHARGES ¹	TOTAL
750 and Over	\$400	\$100	\$40	\$540
500	432	108	43	583
400	495	124	49	638
300	600	150	60	810

¹This does not include an interest or depreciation charge on funds invested in dormitories or dining halls. Dormitories and dining halls are assumed to be self-supporting and to return to the college 5 per cent interest on the funds invested.

In analyzing Table 70 it should be remembered that the data upon which these estimates are based were obtained from institutions situated in the territory of the North Central Associa-

¹L. D. McArdle. *Uniform System of Accounts and General Instructions for State Departments and Institutions.*

tion of Colleges and Secondary Schools. Some of these institutions are located in cities and others in rural communities. Educational costs are affected somewhat by the locations of institutions, since a dollar will purchase more in some communities than in others. Furthermore, standards of living which staff members must maintain are not at all uniform among different communities in the same state, or among different states. Also, the expenses of institutions for items such as heat and light depend very largely upon geographical location. Because of factors such as those mentioned above, slight modifications of the schedule proposed must be made for different localities.

Programs for Institutions with Limited Funds

A number of the colleges do not have adequate funds with which to finance in a satisfactory manner the programs of work which they are attempting to carry on. In general, institutions must obtain the major portion of their support from within the state in which they are situated. The limitations of wealth and income in some of the states, and particularly among the constituency supporting the institutions, make it well-nigh impossible to obtain adequate funds for the support of a satisfactory educational program. There are not many institutions which have adequate funds with which to support the programs outlined in the previous section for thoroughly effective junior and senior colleges. In states where a number of high grade institutions are available, the writers are of the opinion that the goal set should be nothing less than that of a thoroughly effective college. This will require of institutions situated in those states, either a limitation of enrolment, so more funds will be available for the education of each student, or increased funds for current expenditures.

In states where young people of college age have fewer educational advantages, as is the case in some of the southern and western states, the total contribution which an institution may be able to make to the educational program of the state in which it is situated may be greater if a somewhat larger number of students is accommodated than would be possible if the

expenditures per student were as high as those suggested for the effective college. Certainly this is not true in states or communities where students have the opportunity of attending high grade institutions. In any state, whether north, south, east, or west, the minimum goal set by any institution should be that of a fully accredited institution in the region in which it is situated.

During the past two decades, great changes have occurred in the status of the American college. Not only have student enrolments increased greatly but enormous increases have also occurred in the amount of funds available for the support of institutions of higher education. Standardizing agencies have increased their requirements to an extent which makes it next to impossible for institutions with limited constituencies and limited funds to survive. Furthermore, it appears that the time is at hand when institutions must either meet the requirements of accrediting associations or close their doors. Those institutions which cannot hope to obtain at any early date sufficient funds with which to maintain their work upon the level of standard requirements might well decide to cease their operations at once, since efforts to continue as non-accredited institutions will result inevitably in a decreased student enrolment; this, in turn, will cause an increased per capita cost which will result, ultimately, in the closing of the institution.

In many respects the most powerful accrediting agency for colleges at the present time is the North Central Association of Colleges and Secondary Schools. Fifteen years ago, the number of non-accredited four-year colleges in states of the North Central Association was large; today, this number is much smaller. Indications are that, within a few years, a majority of those institutions remaining unaccredited will either be compelled to meet the standards of the North Central Association or cease their operations.

In the territory of the Association of Colleges and Secondary Schools of the Southern States the number of four-year colleges failing to meet accreditation requirements is very much greater than in the territory of the North Central Association of Col-

leges and Secondary Schools. However, Southern institutions are now passing through a period of transformation similar to that which occurred among Northern institutions a few years ago. It appears almost certain that four-year colleges unable to meet the requirements for accreditation of the Association of Colleges and Secondary Schools of the Southern States within the next five or, at the most, ten years, will be compelled to close their doors.

In these days when standardization holds such an important place in college administration, it would seem altogether unjustifiable to place upon a student the handicap of receiving his college education in an institution which is not recognized as a standard college. It is not of primary importance that an institution have a large enrolment—it is important that the educational program of the institution bear a relation to its financial status. Institutions which strive for the minimum standards suggested above will keep their enrolments small until they become thoroughly efficient. In the words of Dean Cole, of Oberlin College, “colleges . . . have no right to grow larger until they can surpass reasonable minimum standards established for institutions of their present size.”

The question naturally arises, then, as to the expenditure necessary to maintain an institution of a given enrolment on a plane which will not only meet the standards of the regional accrediting associations, but will also guarantee a reasonably satisfactory quality of education to its students. We are not here concerned with the thoroughly effective college, as discussed in a previous section, but only with the minimum attainable standards to be set as the goal for those institutions whose funds are limited and in whose territory there exists no thoroughly effective college.

The cost of maintaining an institution which attempts only to provide a reasonably satisfactory quality of education may be approached by a study of certain desirable minima, such as: average faculty salary, educational expenditure per student, and ratio of students to faculty members. Table 71, which follows, shows such desirable minima for institutions of various sizes,

together with the total expenditure necessary to maintain at this level the different sized institutions.

Table 71 sets up the minimum desirable average faculty salary, educational expenditure per student, and ratio of students to teachers for institutions of different sizes. The desirable minima indicated in Table 71 are based on the writers' experience, not only in surveying various institutions, but also in making cost studies for the North Central Association of Colleges and Secondary Schools. It is the opinion of the writers,

TABLE 71. EDUCATIONAL PROGRAMS FOR INSTITUTIONS WITH LIMITED FUNDS

MINIMUM DESIRABLE						
NUMBER OF STUDENTS	AVERAGE FACULTY SALARY	EDUCATIONAL EXPENDITURE PER STUDENT	STUDENTS PER TEACHER	NUMBER OF FACULTY	TOTAL FACULTY SALARIES	TOTAL EDUCATIONAL EXPENDITURE
200	\$3,000	\$350	17	12	\$ 36,000	\$ 70,000
300	3,000	310	19	16	48,000	93,000
500	3,000	270	20	25	75,000	135,000
750	3,000	250	20	38	114,000	187,500
1000	3,000	250	20	50	150,000	250,000
2000	3,000	250	20	100	300,000	500,000

based on these observations, that an institution cannot fall below the minima set up with respect to average salary of faculty or expenditures per student without seriously endangering the quality of the educational program.

College education in institutions predominantly religious in atmosphere, and of a comparatively small size, is securely entrenched in the regard of large groups of parents. The appeal of such institutions is often stronger than that of state colleges which may possess somewhat superior scholarly resources and equipment. However, the patronage of the private colleges is increasingly affected by the ability of the institutions to meet the accepted standards and to offer a reasonably effective type of educational program.

A four-year institution which cannot hope to receive sufficient funds to finance in a thoroughly adequate manner its present program can follow one of the following policies: (1)

limit its enrolments; (2) become a junior college; (3) affiliate with a university and offer a program similar to that of one or another of the Disciples institutions now affiliated with state universities. The possibility for an extension of the junior college program is worthy of some discussion at this point.

The development of the junior college idea has been discussed briefly in one of the earlier chapters of this report. The junior college movement has come almost entirely during the present century. Only six junior colleges were in existence in the year 1900. The greatest development has been since 1909. Concerning the institutions existing at the beginning of 1923, Koos's¹ figures show that during the period from 1909 to 1923, 45 of the 46 public municipal junior colleges, all of the state junior colleges (24 in number), and 104 of the 137 private junior colleges were established. Of the total of 207 junior colleges in existence in 1922, 173 or 83 per cent had been established during the preceding 13 years. Complete data are not available concerning the number of junior colleges established since 1923; however, such data as are available lead to the conclusion that the junior college movement has developed considerable momentum during the past four years.

In the *Texas Educational Survey Report*,² Judd mentions a number of the advantages which may be expected from the development of a junior college system. Young people can be educated nearer to their homes, and this makes possible a continuance of home influences and contributes to the right kind of moral influences in these earlier years. Such institutions would be in a position to give the first two years, which might include a pre-medical course, pre-law work, and pre-dental work. Such institutions would also be in a position to meet the vocational demands of business and industry for higher training of the non-degree type. These institutions would fill an important place in the educational system by relieving the universities from the burden of large freshman and sophomore classes. Due

¹See Koos, Leonard Vincent, "The Junior College," *Research Publications of the University of Minnesota*, Education Series No. 52, Minneapolis, Minnesota, 1924.

²See the volume on *Secondary Education* by Charles H. Judd, pp. 74-75.

to the fact that classes in the junior colleges would be smaller, instruction could be better controlled. Judd states that "All of the evidence points to the fact that such a plan would increase college attendance. . . . The pulling influence of these well-organized and well-conducted junior colleges would be of incalculable benefit to the entire school system."

The writers are of the opinion that the junior college has come to stay, and that a number of the smaller and weaker four-year colleges would obtain larger educational returns by developing as standard junior colleges than by becoming or remaining weak four-year institutions.

Summary

The wide variation among the institutions surveyed with respect to unit costs suggests the need for some standards relative to what education ought to cost in a thoroughly effective college. On the basis of the information obtained through the surveys, suggested programs are set up in terms of expenditure for institutions of different enrolments, which, with efficient administration, should guarantee a thoroughly effective grade of instruction. These programs are set up only for institutions unhampered by a limitation of funds, which are in competition with other institutions already offering a thoroughly effective grade of instruction.

The fact that practically every one of the institutions surveyed must be maintained under a distinct limitation of funds suggests that type programs should be set up for institutions operating under such handicaps in order that the program undertaken may not be more ambitious than can be carried on with reasonable effectiveness. Such institutions can exist only in states in which thoroughly effective colleges and universities are not available for the young people. The minimum goal to be attained by any institution should be standardization by the regional accrediting association operating in its territory. Four-year institutions which cannot hope to be accredited within the next few years, due to failure to meet standards, can adopt

one of three or four alternatives. Perhaps the best suggestion is for such institutions to become junior colleges. There are also the possibilities of reducing the enrolments to a point consistent with the funds available, affiliation with a large university or college, or the discontinuance of the institution. Type programs are set up for institutions of various enrolments showing the expenditures that will be necessary to maintain a reasonably effective college under the handicap of limited funds.

CHAPTER XIII

SOURCES OF REVENUE

Since the continuation of the work of the colleges is so vitally associated with adequate financial resources, it becomes important to study in some detail the sources of revenue now employed. In this chapter three topics will be discussed: (1) an analysis of the present sources of receipts and their relative contributions to the finances of the institutions; (2) the management of invested funds, particularly endowments; and (3) some possibilities of sources for increased revenues.

Analysis of Sources of Receipts

Table 72 shows the current educational expenditure, the income received from students, the per cent which income received from students is of current educational expenditure, the income received from endowment, and the per cent which income received from endowment is of current educational expenditure, for seventeen Disciples colleges. In the case of each institution, the data presented are for the year during which the survey of the institution was made. The income received from students and the income received from endowment both include all undesignated incomes from these sources which was actually expended for educational purposes. Only income used for educational purposes is included in Table 72. Undesignated income expended for purposes not strictly educational in character is not included. A part of the income reported as income received from students is actually derived from funds designated for student aid. That part of the income from funds designated for student aid which was actually used to pay tuitions is included as income from students, since this income cannot be used for any purpose except student aid.

TABLE 72. ANALYSIS OF SOURCES OF INCOME FOR SEVENTEEN COLLEGES

INSTITUTION NUMBER	CURRENT EDUCATIONAL EXPENDITURE	INCOME RECEIVED FROM STUDENTS	PER CENT WHICH INCOME RECEIVED FROM STUDENTS IS OF CURRENT EDUCATIONAL EXPENDITURE	INCOME RECEIVED FROM ENDOWMENT	PER CENT WHICH INCOME RECEIVED FROM ENDOWMENT IS OF CURRENT EDUCATIONAL EXPENDITURE
6	\$ 61,175	\$ 61,175	100	0	0
9	232,886	218,522	94	\$14,364	6
3	226,895	181,518	80	45,377	20
14	101,477	79,272	78	9,000	9
19	60,210	35,463	59	23,185	39
12	54,650	29,428	54	9,921	18
10	103,479	54,216	52	33,000	32
5	28,450	14,500	51	0	0
7	53,831	25,059	47	11,170	21
11	123,608	57,672	47	50,736	41
16	28,713	12,400	43	100	3
8	78,950	31,668	40	47,282	60
2	129,627	47,776	37	81,851	63
1	38,027	13,506	36	3,503	9
18	96,959	25,050	26	47,004	48
4	45,662	11,992	26	17,283	38
15	13,575	2,947	22	0	0
Total	\$1,478,174	\$902,164	61	\$393,776	27

Table 72 shows that the per cents which income received from students is of current educational expenditure range from 100 at institution number 6 to only 22 at institution number 15, and that the per cents which the income received from endowment is of current educational expenditure range from 0 at three institutions to 60 at institution number 8. For the seventeen institutions combined, the income received from students represents 61 per cent of the current educational expenditure, and the income received from endowment represents 27 per cent of the current educational expenditure. The amount of income which the seventeen colleges receive from students is approximately equal to the expenditures of these institutions for instructional salaries.

Added significance is given to the analysis of the sources of receipts of Disciples colleges when comparisons are made with similar data from other institutions. From data available in

reports prepared for the North Central Association's Committee on Cost of College Education,¹ it is possible to compare the per cent of income received from students and the per cent of income received from endowment at Disciples colleges with similar per cents for a number of standard colleges and universities of other religious communions. The twenty-four institutions listed below, all holding membership with the North Central Association of Colleges and Secondary Schools or the Association of Colleges and Secondary Schools of the Southern States, are included in these reports.

Antioch College	Illinois College
Carleton College	Illinois Woman's College
Centre College	Knox College
Coe College	Macalester College
Concordia College	Millikin University
DePauw University	Illinois Wesleyan College
Earlham College	Monmouth College
Franklin College	Oberlin College
Georgetown College	Ohio Wesleyan University
Gustavus Adolphus College	Shurtleff College
Hamline University	St. Olaf College
Huron College	Wabash College

Table 73 shows data for these institutions comparable with the data presented in Table 72.

An examination of Table 73 shows that the per cent which income from students is of current educational expenditure is the same for the twenty-four institutions of other religious denominations combined as the per cent for the seventeen Disciples colleges. However, the per cent which income received from endowment is of current educational expenditure is almost one-fifth greater for the twenty-four institutions than for the seventeen Disciples colleges. The Disciples institutions depend for support to a greater extent upon gifts from churches and individuals than do the institutions of the several denominations represented in Table 73.

¹*North Central Association Quarterly*,

a. Floyd W. Reeves. "The Cost of Education in Liberal Arts Colleges," December, 1927.

b. *Ibid.* "Financial Standards for Accrediting Colleges," March, 1928.

TABLE 73. ANALYSIS OF SOURCES OF INCOME FOR TWENTY-FOUR ACCREDITED COLLEGES AND UNIVERSITIES

INSTITUTION NUMBER	CURRENT EDUCATIONAL EXPENDITURE	INCOME RECEIVED FROM STUDENTS	PER CENT		PER CENT	
			WHICH INCOME RECEIVED FROM STUDENTS IS OF CURRENT EDUCATIONAL EXPENDITURE	INCOME RECEIVED FROM ENDOWMENT	WHICH INCOME RECEIVED FROM ENDOWMENT IS OF CURRENT EDUCATIONAL EXPENDITURE	
1	\$144,305	\$125,544	87	\$ 18,761	13	
2	197,098	166,732	85	3,754	2	
3	504,202	396,212	79	107,990	41	
4	309,220	237,440	77	57,656	19	
5	73,102	54,315	74	18,787	26	
6	69,381	50,121	72	3,857	6	
7	217,865	145,905	67	8,762	4	
8	219,662	139,170	63	62,403	28	
9	153,411	95,443	62	54,673	36	
10	77,423	47,884	62	29,539	38	
11	152,592	93,607	61	58,985	39	
12	155,367	95,122	61	52,593	34	
13	82,156	46,022	56	36,134	44	
14	386,038	217,931	56	119,382	31	
15	179,414	98,383	55	81,031	45	
16	95,089	50,315	53	42,000	44	
17	554,881	275,704	50	279,177	50	
18	52,131	25,569	49	22,995	44	
19	147,876	71,811	49	74,775	51	
20	101,911	47,069	46	37,930	37	
21	116,163	47,691	41	68,472	59	
22	120,151	48,835	41	30,229	25	
23	135,717	51,920	38	41,687	31	
24	87,800	29,587	34	57,496	66	
Total	\$4,332,955	\$2,658,332	61	\$1,369,068	32	

Endowment Investments

Trevor Arnett¹ has defined college endowment as "a fund, the principal of which is invested and kept inviolate and only the income used for the general support of the college, or for some specific object in connection with it." From this definition it follows that a college has no moral right "to do anything with endowment except to invest it so that it will produce a certain and steady income." Speculative investments are not suitable investments for endowment funds.

¹Trevor Arnett, *College and University Finance*. Published by General Education Board, New York City, 1922.

In "College and University Finance," Arnett has set up a number of principles relating to the investment of endowment funds which appear essential in order that the fund may be maintained. Some of the most important of these principles are listed below.

(1) Endowment funds shall be invested in such a way that the income shall be assured and the principal kept intact.

(2) Safety of the principal is the first consideration; otherwise, the permanency of the income may be endangered.

(3) The size of the income, although secondary to the safety of the principal, is important.

A number of types of endowment investments often made by colleges are not in accord with these principles. Several of the colleges surveyed have from time to time been led to invest endowment funds in types of securities which do not conform to the principles suggested above.

One college loaned endowment funds to friends of the institution for the purpose of building homes. In some instances the loans amounted to 80 or 90 per cent of the appraised value of the property. Some of the homes decreased in value and the college lost a portion of its endowment. In other cases the interest on the loan was not paid, and the college was compelled to choose between two alternatives: foreclosing on the property of friends of the institution and relatives of faculty members, or losing the interest.

One institution loaned a part of its endowment to a church. This loan is not readily negotiable; consequently, it is unsatisfactory. The same institution loaned funds to faculty members and officers of the college. This will prove unfortunate if the interest on the loans becomes delinquent, or if the loans are not paid at maturity, for the trustees of the college might be called upon to enforce collection against its own officers and faculty.

Two institutions have invested endowment funds in college academic buildings and lands; two have invested funds in athletic fields; four have invested funds in dormitories. None of these types of investments is a satisfactory form of en-

dowment investment. In this connection Arnett states: "Campus, laboratories, libraries, recitation buildings are not endowment, and funds so invested simply cease to be endowment, for they produce no money income."¹

The income from dormitories is not stable, since this income is affected by the operation of the college, the enrolment of the institution, and a number of other factors which cannot be foreseen. Furthermore, after provision has been made for depreciation to provide a fund for the replacement of the principal invested, less than one-third of the dormitories operated by colleges surveyed pay as much as 3 per cent on the investment, while a number pay practically no interest. It is impossible for a college to sell its dormitories for anything more than a small fraction of their cost if they become unprofitable; however, if funds are invested in bankable securities, the college may readily change the form of its investment.

Four institutions have, within the past five years, borrowed from the endowment fund to pay current expenses, or for the expense of repairing buildings, or for collateral on loans. One institution has not separated restricted endowment from unrestricted endowment; yet the income from restricted endowment may legitimately be used only for the specific purpose for which the fund was given. One institution changed the book value of endowment assets to record estimated increases; as a result when the value of these assets later decreased, the endowment fund decreased.

While a number of colleges have invested endowment funds from time to time in undesirable ways, and in some instances, lost their endowment, the amount which has been lost in this way during recent years has not been large. Furthermore, during the past two years some endowment funds which had been hypothecated and used for purposes such as those mentioned above have been replaced. The authorities of these institutions now have a better understanding of the purposes of endowment than was formerly the case, and it appears probable that there will be fewer cases of misuse of endowment

¹Op. Cit. p. 43.

funds in the future than there have been in the past. The improvements which have been made in the accounting systems of these institutions have been of assistance in keeping endowment funds separated from all other funds.

In the past it has been considered the part of wisdom by many authorities to invest college endowment very largely or almost exclusively in high grade bonds or in first mortgages on improved real estate. Arnett,¹ writing in 1922, stated: "As a rule, common stocks should be avoided. . . . Carefully selected first mortgage bonds and real estate first mortgages on improved farms in good localities, preferably in the same state as the college, or in contiguous states, and first mortgages on city property where the college is located, or in nearby cities, make proper investments." Later, Arnett modified his opinion with respect to stocks as endowment investments. In March, 1927, he made the following statement:²

"When the value of the dollar is appreciating, income in stated amount from bonds and mortgages becomes more valuable because of its increased purchasing power; but when the value of the dollar is depreciating, a fixed income becomes less valuable as measured in purchasing power. Investments should be selected in such proportions as to try to keep in equilibrium the two tendencies above described. Investments in real estate, where it is possible to increase the return by increasing the rents, and in stocks, where the annual return may reflect the current situation, might in proper amounts be made for the above purpose."

A bondholder gets no increased returns if the company issuing the bonds is in a prosperous condition, but if the earnings of the company are not adequate to meet the interest payments, the bondholder often loses heavily. Some classes of common stocks, however, provide a great opportunity for profit through participation in earnings. In a recent paper Professor Irving Fisher develops the theory that common stocks are preferable to bonds as a form of investment. His conclusions follow:

¹Ibid. p. 33.

²Trevor Arnett, "Handling Endowment Funds" in *Cooperation in Fiduciary Service*, Alfred Williams Anthony, editor, The Abbott Press & Mortimer Walling, Inc., New York, 1927.

"There are, then, five reasons for the now proved fact that stocks are a better investment than bonds:

1. The stockholder stands to win as well as to lose.
2. Modern dividend policy is toward steadiness.
3. A portion of the stockholder's earnings is reinvested for him and ultimately yields further dividends.
4. The unstable dollar tricks the bondholder, but any effect on the stockholder is largely neutralized.
5. Diversification can correct the irregularities of the stockholder's income, but not that of the bondholder.

In short, the alleged safety and steadiness of bond incomes are dearly paid for."

There appears to be little question but that a well-diversified list of investments should include some common stocks. Diversification of industries and localities is wise because there is less probability that a number of industries in several localities will be adversely affected at the same time. In the judgment of the writers the types of investments and the proportion of each type might well be as follows:

Selected Bonds	30% to 40%
Guaranteed Mortgages on Improved Real Estate.....	15% to 30%
Seasoned Preferred Stock	5% to 10%
Improved Real Estate.....	5% to 15%
Selected Common Stocks.....	20% to 30%

Some kinds of securities are valuable to the average purchaser for reasons which do not make them valuable to the college. Tax exempt securities are of this class, because educational corporations are themselves tax exempt.

Knowledge and skill are required to invest endowment funds wisely. Securities which are not wise investments for some particular individual may be wise investments for an educational institution. Those responsible for the investment of endowment funds should have special skill and a wide knowledge of financial, economic and political conditions. Ability of this type is difficult to secure. Institutions with large funds to invest find it easier to obtain expert ability since they attract to their boards of trustees, more often than the small institutions, men of large affairs. These men are accustomed to seeking advice of experts, and usually do seek advice with respect

to the investment of funds from bankers and trust companies. Small colleges, particularly if located in rural sections, often find it exceedingly difficult to obtain financial experts as members of their boards. When expert financiers are available as trustees, they seldom have time to give a sufficient amount of their own personal attention to the college investments to invest their funds most wisely. Institutions need to seek expert advice in making investments.

Recently Arnett¹ pointed out that institutions with large resources can obtain expert advice because they are able to employ high-priced advisers—but those with small resources cannot afford to do so. He suggested that the small colleges combine in retaining one or more high-priced advisers. In the judgment of the writers a plan of cooperation of this type would be well worth while.

If the colleges decide not to cooperate in obtaining an expert adviser, one of a number of other plans might be adopted, any of which would be preferable to the plans now followed by some of the institutions. That some institutions have invested their funds much more satisfactorily than others is shown by the fact that over a period of years the endowment investments of some institutions have netted only 4 per cent, while those of other institutions have netted more than 6 per cent.

One plan of watching the securities already owned which is followed by some institutions with very satisfactory results is to refer the list of investments to a banker, broker or trust company for appraisal at stated times, such as once or twice each year. Advice is obtained as to the possible desirability of greater diversification, or the wisdom of disposing of certain securities. This is a type of service which any of the larger investment banking houses are glad to render. Complete reports can be made to the college on each separate security. In these reports, factors which may affect the value of the security such as callable price and date, current market, and any

¹*Cooperation in Fiduciary Service.* Papers Presented at a Conference on Financial and Fiduciary Matters, Hotel Chalfonte, Atlantic City, N. J., March 22-24, 1927, p. 15.

other weaknesses in the securities, which may have developed since the last examination, will be pointed out.

A third method whereby institutions with relatively small endowments may protect themselves from a loss of securities and obtain a stable income is to place the funds in the care of a trust company.

Institutions located in rural communities with funds not in excess of \$1,000,000 might well consider the advisability of placing the funds directly in charge of corporate trustees. The Findings Committee of the Committee on Financial and Fiduciary Matters of the Federal Council of Churches of Christ in America makes the following recommendation relating to corporate trusteeship:¹

"We recommend—That institutions, such as colleges and societies, which do not have immediately available as members of their boards and finance committees, men who are acknowledged experts in the handling of investments and trusts, consider the advisability of placing their permanent funds in the hands of a trust company or bank as custodian and fiscal agent. Care should be exercised in the selection of such corporate fiduciary, to insure that it is one of unquestioned ability and strength. Where such organizations are not ready so to place their funds they should avail themselves of the constant and interested service of several large banks, trust companies, or investment houses, for the continued scrutiny and maintenance of their securities on the highest possible level."

Even in the case of large institutions with successful men having large business interests as trustees, trust companies can perform a valuable function in serving as custodian of the securities. Charges for this service are usually relatively small, and the finance committees of the colleges have the assistance of experienced officers of the trust companies in keeping in touch with changing business conditions.

Sources of Increased Revenues

There are three possible methods of effectually increasing the revenues available for strictly educational purposes at any institution. The first method is through economies effected in

¹*Cooperation in Fiduciary Service*, pp. 150 ff., Alfred Williams Anthony, ed. The Abbott Press & Mortimer Walling, Inc., New York, 1927.

the existing organization which will allow a reduction of actual expenditures for the present accomplishment. The second method of increasing revenues is the obvious one of finding new and untapped sources of revenues. The third method of increasing revenues is to increase the receipts from the present sources of revenues. Each of these three methods of increasing the revenues available for educational purposes will be discussed in turn.

There are two types of economies which are suggested as methods of increasing the funds available for educational purposes. The first has to do with direct economies in the operation of the strictly educational part of the program of the institutions. The second has to do with either the elimination or reduction of certain items of expenditure for phases of the program that may not be classed as strictly educational.

In each of the institutions surveyed, the writers made recommendations regarding certain economies that might profitably be introduced into the operation of the strictly educational program of the institution. A summary of these recommendations shows that, for the institutions as a group, there are two important economies of rather universal application.

The first of these has to do with the utilization of space. The tendency in most institutions, as soon as there begins to be the least suspicion of a crowded condition, is to begin immediate plans for the construction of new buildings, without making any very extensive study of the possibilities of relieving the situation by a better utilization of the existing space. Such a tendency results in the diversion of funds, which might otherwise have been available for the current educational program, into large items of capital outlay. The present situation with regard to the utilization of space at the institutions surveyed has been given in another section of this report.

Much of the loss and inefficiency occasioned by poor utilization of space is traceable to faulty planning of buildings. The most noticeable defect is the failure to provide adequate office facilities for faculty members, with the result that instructors are assigned to recitation rooms for office purpose. This re-

sults in a low per cent of utilization of the rooms, because no classes can be held in such rooms except those of the instructor to whom it has been assigned for office purposes.

A second defect in the planning of buildings for maximum utilization is in the tendency to make all recitation rooms of the same size. Since experience shows that classes have a wide range in enrolments, recitation rooms should have a roughly corresponding range in capacity, in order that classes may be assigned to rooms the capacity of which they will more fully utilize. These two factors of provision for instructional offices and variation in size of class rooms should be carefully watched in the planning of new buildings.

It frequently happens that an apparently crowded condition, accompanied by a low degree of utilization, can be relieved by some relatively inexpensive remodeling, rather than by new building construction. The provision of separate office rooms for faculty members can often be accomplished with little expense by partitioning other rooms, thus making the instructor's recitation room available for other recitations when his classes are not meeting in it.

The fact has already been pointed out in a previous chapter that many of the institutions are not utilizing all of the available recitation periods during the week in the scheduling of classes. Frequently it is possible to relieve an apparently crowded situation by scheduling more classes at the hours of minimum use of rooms, thus obviating the necessity of new building construction.

It is obvious that any procedure tending to a better utilization of space enables the institution to handle a larger student enrolment without increasing its capital investment in buildings. Thus any funds diverted from capital outlay become available for current educational purposes and result in an effectual increase in revenue for this purpose. There is a still further direct saving in costs of operation, and an indirect saving by lessening depreciation and interest on capital invested in buildings.

A second economy that is possible in every institution surveyed would result from the reduction in the number of very small classes. Practically every institution shows a large expenditure of time on the part of faculty members in the teaching of small classes. Since the teaching load of instructors has a rather definite upper limit, the multiplication of small classes results usually in an increased number of faculty members, with a consequent increase in the educational expenditures (provided the average salary is not lowered) and a higher cost per student than is justified by the quality of the educational offering.

Two or three suggestions may be made as to the methods by which the number of small classes may be reduced. The first is by the alternation of courses through the giving of the courses in alternate years, rather than every year. This results in no diminution of the opportunity offered students, since the course will be available for every student desiring it during his college residence. A second suggestion is for a reduction of the number of departments offering major and minor work. The multiplication of departments results usually in an extension of the offerings without adequate check as to the demand for the new courses. In order to justify the separate existence of a department, there is a feeling on the part of most department heads that an extensive offering of courses is necessary. This offering appeals only to a limited group of students and as a result many of the courses have only small enrolments. A third suggestion is for the limitation of electives taken by students to departments which offer a major or a minor.

It will be seen that the suggestion for a reduction of the number of small classes either by the limitation of the number of departments offering major and minor work, or by the limitation of students' electives to departments offering major and minor work, will result in a limitation in the total scope of the offering of the institution. It is felt that the college has an obligation to do well whatever limited task its funds will permit, rather than to offer an extensive program of a mediocre

or inferior quality. Such a principle implies the selection of students on the basis of their desire for the particular type of education which the institution has chosen to offer.

Investigations of the writers show that the major and minor needs of 90 per cent of the students of the institutions surveyed fall within a group of seven or eight subject matter departments. The relatively few students seeking a different type of education should be advised to go to other institutions offering the type of work they desire, rather than encouraged to attend the college of limited program, with an attempt to extend the program to include their fields of special interest.

A reduction in the number of small classes with no change in the number of large classes, should result in an increase in the ratio of students to faculty members. An increase in this ratio will result in an effectual increase in educational revenues through one of two means: (1) a larger number of students, with consequent increase in receipts from fees; or (2) a smaller number of faculty members, with consequent reduction in expenditures.

The two items of economy that have been suggested, namely better utilization of space and reduction in number of small classes are the principal ones noted under this classification of possible economies in the educational operations of the institutions. No other major items of waste in connection with the educational program were noted. In fact, the institutions in most cases, with the two exceptions noted, show a commendable degree of economy in their administration of the expenditures for the educational program.

The second major economy that has been suggested as a possible source of increased revenues has to do with the elimination or reduction of expenditure for certain objects which are not a part of the strictly educational program. The suggestions made herewith would result in increased revenues because the funds released from the support of non-educational activities could be diverted to the support of the strictly educational program. Certain items will first be mentioned which,

it is felt, should be entirely eliminated as a charge against the resources of the institutions. The items will be mentioned in order of their magnitude.

The first item of expenditure for non-educational purposes which should be eliminated entirely is loss on supplementary business activities, such as dormitories, dining halls, bookstores, laundries, etc. It should be entirely clear that the funds in the control of institutions have not, except in the case of certain specially designated funds, been given for the purpose of providing board, room, or books at less than cost. Yet all except three or four of the institutions surveyed show that some of their supplementary business activities are being maintained at an actual loss. If depreciation on plant and equipment, and interest on capital invested were charged against these enterprises as they properly should be, the books of a majority of the institutions would show losses on every one of the supplementary business activities engaged in. As a matter of fact, very few of the institutions charge more than two-thirds the amount necessary to make these activities self-supporting. Many institutions whose income is insufficient to meet the necessary educational expenditures, and who consequently are showing an annual deficit in their budgets for educational purposes, are nevertheless maintaining dormitories, dining halls, bookstores, and such supplementary business activities at an annual loss of as much as \$10,000 to \$20,000. In many institutions now hard-pressed for funds, the annual deficit for educational purposes would be easily met if the institution's funds were not diverted to the support of these supplementary activities.

In contrast to the situation with regard to losses on dormitories, dining halls, etc., which prevail at a majority of institutions, is the situation of three or four of the colleges which have maintained these activities on a self-supporting basis without aid from the institutional budget over a period of several years. Christian College in Missouri, and Atlantic Christian College in North Carolina are examples of institutions which have run these supplementary business activities on a

self-supporting basis for many years. The fact that these activities can be engaged in without a contribution from the institutional budget is clearly shown by the cases of the institutions referred to above. There seems no justification whatever for the diversion of funds from their proper place in the support of the strictly educational program to the maintenance, at a net loss, of these supplementary business activities.

The second item, in point of magnitude, of expenditure for non-educational purposes is the losses that annually must be charged off to bad debts in many of the colleges. The greater part of these bad debts that must every year be written off as uncollectable consists of unpaid tuition and dormitory fees of students. From one-third to one-half of the institutions surveyed have considerable annual losses from this source. The amount to be written off annually varies from a few hundred dollars to as much as \$12,000. There is no excuse for this situation. From an educational point of view, it is extremely poor business training for the student to allow him to create a debt which he cannot or will not liquidate. From the administrative point of view, the implication is for a fee collection system that will admit of no losses from bad debts.

In point of the amount involved, the third unjustifiable item of expenditure for non-educational purposes is that for interest on debt. Obviously the elimination of this item can only be accomplished by paying off existing indebtedness and refusing to create further obligations. Expenditures for interest on debt are one of the most important sources of waste in from one-third to one-half of the colleges surveyed. If the principle be accepted that no college owes students an education for which it does not have funds to provide, it becomes perfectly apparent that the "pay-as-you-go" policy is the only justifiable course. Expenditure for interest on debt therefore becomes an item of waste which should be eliminated from the institutional budget.

The fourth item of waste, which should be eliminated from the non-educational program is the subsidy of competitive athletics. Much of the loss from this source is occasioned by

allowing students engaged in athletics to create debts which, it is more or less tacitly assumed, they will not be called upon to repay. A few of the colleges openly provide their athletes with free tuition and in some instances, with free board and room also. Others, less openly, in effect do the same thing by allowing their athletes unlimited credit for these items with the tacit understanding that the debts are never to be paid. The loss from this source then appears on the books as a loss from bad debts. As a matter of fact, if the losses from bad debts were accurately classified so that those which are really a subsidy of athletics should be placed under the proper heading, athletics would supplant losses from bad debts as the second most important source of waste in the support of the non-educational program.

Besides the four items of non-educational expenditure mentioned, which it is felt should be entirely eliminated as a charge against the funds of the institutions, there are two items of non-educational expenditure which might be considerably improved in efficiency.

The first of these items is expenditure for promotion. Practically all of the institutions find it necessary to spend some funds for promotional purposes, either in order to obtain additional funds for support, or in order to attract students, or both. In a few of the institutions a program of promotion is maintained which is too expensive for the results being obtained. No reduction of expenditures is suggested on this item, but there should be a careful check on the results of the promotional program in order to be sure that the department is operating efficiently.

A second item of expenditure for non-educational purposes, which should be carefully examined to see that satisfactory results are being maintained is the funds used for scholarships. In many institutions scholarships are provided from funds specially designated for the purpose. In other cases scholarships are maintained out of the current budget. A few of the institutions that already have a larger number of students

than they can handle satisfactorily with their present available resources, are yet remitting the fees to a large number of students in order to obtain still larger enrolments. In accord with the principle that a college does not owe to students an education for which it cannot pay, it is recommended that institutions with limited funds do not give scholarships unless there have been gifts especially designated for such purpose.

At the beginning of this section, it was suggested that there are three possible ways for increasing the revenues available for the educational program. The first of these methods, dealing with economies that are possible in the present administration, has already been discussed. The second method suggested was to find and tap new sources of revenue. The writers have no suggestion to offer with respect to new sources of revenue. It would seem that every source which could with any confidence be recommended is now being used.

The third method of increasing revenues is to increase receipts from present sources. As has been previously shown, the present receipts come principally from four sources: (1) interest on permanent funds; (2) appropriations from churches; (3) individual gifts; (4) student fees. The possibilities of deriving increased revenues from each of these sources will be discussed.

The income received from interest on permanent funds may be increased by two methods, first by getting a better interest rate, and second by increasing the capital amount of the permanent funds. The first of these methods has already been discussed in a previous section of this chapter. Some suggestions will be given with respect to methods for increasing permanent funds, which have not been used to advantage as frequently as they might have been.

A method of procuring increased permanent funds that is frequently employed is through bequests by insurance. The fact that an insurance gift can be made in relatively small annual contributions instead of in a single large outlay results in the receipt of gifts which would not otherwise have been made.

The plan of leaving bequests to educational institutions in the form of insurance eliminates the administrative expenses connected with annuity gifts. An added advantage of insurance which often appeals to wealthy individuals is that, within certain limitations, premiums may be deducted from net income subject to income tax, if the insured does not reserve the right to change the beneficiary.

The second method of increasing endowment funds is through gifts in the form of annuities. Educational institutions and missionary societies are becoming increasingly active in securing funds on which annuities are given to the donors. One missionary society increased its annuities during a period of four years as follows:¹ "The basic year, \$125,000 was received; the next year, on an expenditure of \$600 for publicity, there was received \$325,000; the third year, with \$2,000 spent in advertising, the receipts were \$750,000, and the fourth year about \$1,100,000." In accepting annuities very careful consideration should be given to the question of rates. Survivorship rates should bring the same results as contracts on a single life. It is unwise to provide an annuity on more than two lives. All rates should be prepared by an actuary. After annuity funds have been received they should be kept separate from all other funds. Experience has shown that the acceptance of bequests in the form of annuities at rates scientifically determined is one of the most satisfactory methods whereby endowment funds may be increased. When an institution adopts the plan of increasing its endowment fund through the use of annuities it is frequently advisable to have an insurance company underwrite as many as possible of its contracts, thus making immediately available for endowment the balances of all gifts. If annuity contracts are to be underwritten by insurance companies, it should always be with the full approval of the annuitant.

One of the most careful studies of the conditions under which annuity gifts should be sought is contained in "Annuity

¹Alfred Williams Anthony. *Cooperation in Fiduciary Service*. pp. 86 ff.

Agreements for Charitable Organizations," edited by Alfred Williams Anthony.¹ The conclusions presented in this pamphlet are the result of the deliberations of a special committee of experts who have studied the question of annuity gifts. The officers of any institution which is obtaining funds or is planning to obtain funds through annuities should consult this volume carefully.

The two devices above mentioned, viz., insurance and annuities are long-time plans for increasing endowment, and add to the true endowment fund somewhat slowly. As an immediate measure of increasing endowment, it is recommended that a continuous campaign be carried on for endowment gifts in behalf of such institutions as are justifying their continued existence.

With respect to the second source of revenue used at present, namely appropriations from churches, the writers have no means of forecasting the attitude of the communion toward increasing its annual appropriations for higher education. However, the data relating to benevolence giving from 1920 to 1925 which have been reported by various denominational authorities of the United Stewardship Council or to the Federal Council,² is indicative of present trends. The Methodist Episcopal South, the Presbyterian North, the Disciples, and the United Lutheran all show a general tendency to increase the amount of their gifts; the United Presbyterian, the United Brethren, and the Presbyterian South show a slight decrease in the amount of their gifts; the Methodist Episcopal, the Baptist South, and the Baptist North show a marked decrease in the amount of their gifts.

It is also difficult to forecast the possibility of increasing receipts from the third source, namely individual gifts. However, as long as people continue to hold their present favorable attitude toward higher education, and the economic prosperity of the country continues to increase, it is reasonable to presume

¹Alfred Williams Anthony, editor, *Annuity Agreements for Charitable Organizations*, The Abbott Press & Mortimer Walling, Inc., New York.

²*Ibid.*, p. 38.

that gifts in ever increasing amounts can be expected in answer to the proper presentation of the needs of institutions of higher learning.¹

The fourth source of present receipts, namely student fees, presents certain possibilities in the way of increased funds. It has been previously shown that at present students pay approximately 61 per cent of the current cost of their education. The amount paid by students is slightly greater than the expenditures of the institutions for instructional salaries. There is evident, however, a widespread tendency among collegiate institutions of all kinds to increase fees. More than half of the institutions surveyed had increased fees charged students in 1926-27 over the fees charged at the time the surveys were made. A considerable number of those institutions which had not raised fees previously, are charging increased fees to students during the present year. In the three year period from 1926 to 1929, data for 17 institutions surveyed, and for 24 other institutions for which the writers have accurate figures, show that more than 80 per cent have made marked increases in the fees charged students, without corresponding increases in other sources of revenue. It is the opinion of the writers that by 1928-29 the share of the cost of their education that students bear will probably be much nearer 70 per cent than 60 per cent. It is probable also that during the next six or eight years this per cent will continue to increase. Certainly unless the communions maintaining the institutions come to their rescue with additional funds for maintenance, it will be necessary to increase fees in order to maintain a satisfactory level of instructional efficiency in the colleges.

Summary

An analysis of the sources of receipts of a considerable number of institutions shows that on the average 61 per cent of the total receipts for educational purposes come from students.

¹The Board of Education of Disciples of Christ has recently completed a survey of the constituency of the respective institutions, and has in its file a list of 250,000 individuals who are potential givers. All of these persons have actually given at some time during the last five years. This list is being kept up to date.

Approximately 27 per cent of the receipts for educational purposes come from endowment in the Disciples institutions, which is somewhat less than the per cent received from endowments in a group of standard colleges.

The management of endowment investments is an extremely important part of the financing of a college. Several suggestions are made with respect to the improvement of the management of such funds. Some of the types of mismanagement which have occurred in the past, such as hypothecation of funds, and unwise loans, seem less likely to occur in the future. Suggestion is made for the employment of an investment expert by groups of institutions. The placing of permanent funds under the management of a sound trust company is recommended for such institutions as do not have opportunity otherwise to avail themselves of competent investment advice.

At all of the institutions surveyed there is the problem of obtaining increased revenues. Three possible methods of effectually increasing the funds available for educational purposes are suggested. The first of these is through economies in the existing program which will release funds, now spent uneconomically, for an expansion of the strictly educational program. The economies suggested are of two types. The first type, dealing with economies in the operation of the strictly educational part of the program, refers mainly to more economical use of building space and a reduction in the number of small classes given. The second type, dealing with economies in the operation of the non-educational program, refers to four principal items: (1) entire elimination of losses on supplementary business activities, such as dormitories, dining halls, etc.; (2) elimination of losses due to uncollectible debts owed the institution by students; (3) elimination of interest charges on debts through the introduction of a pay-as-you-go policy; (4) elimination of subsidies for competitive athletics. In addition to these items suggested for elimination, recommendation is made for close scrutiny of the effectiveness of the expenditures for the promotion office and for the maintenance of scholarships.

The second method of increasing revenues would be the discovering and tapping of new sources of revenue. No suggestions are made with regard to possible new sources.

The third method of increasing revenues is to obtain increased receipts from present sources. The suggestion is made that endowment funds should be materially increased, not only through outright gifts, but also through insurance and annuities. There is a possibility of increasing the receipts from students through a continuation of the present tendency to increase fees faster than the rise of the cost of education. The suggestion is made that within a few years students will be paying 70 per cent or possibly an even higher proportion of the cost of their education.

CHAPTER XIV

SCHOLARSHIPS AND LOAN FUNDS

The problem of adequate financial support raises, as corollaries, two additional problems. The first of these is concerned with the degree to which students may be expected to pay the cost of their education. The second involves some technique of estimating, in economic terms, the possibilities of support for an institution by a given constituency. The first of these problems, involving the administration of scholarships and loan funds, will be discussed in this chapter, while the latter problem will be reserved for a following chapter.

In most institutions there have in recent years been marked trends toward increases in the fees charged students. This tendency has brought to the foreground the question of the provision of some form of aid for worthy students who cannot well afford to pay the increased fees. Three principal methods of student aid have long been recognized and practiced, namely remunerative employment, scholarships, and loan funds.

Conditions governing the offering of remunerative employment to students differ markedly among the various institutions, so that it seems impossible to set up any generalized standards for this method of student aid. The extent to which the institution will actively participate in providing remunerative employment for its students will depend upon its clientele and the policy of the institution. The only caution here presented is that the remuneration should be a fair return for the services rendered. Not infrequently a student which a college desires to subsidize, for athletic or other reasons, is given a "soft" job at a rate of remuneration which makes it evident that the employment is only a subterfuge. Such a practice is clearly indefensible.

A scholarship usually provides only for the payment of tuition fees for the student holding it, although in some instances a larger amount is provided to be applied on the living expenses

of the student as well. In theory, scholarships are awarded to students of considerable promise, with the thought that society will benefit greatly by giving them the opportunity for a college education. Thus the holding of a scholarship should be considered a matter of some honor for the recipient involving no little responsibility to "make good."

The funds for the payment of scholarships are provided principally from three sources: (1) the institution in its budget may set aside from its current funds a certain amount for scholarships; (2) the institution may have in its control certain capital funds, the income from which is specifically designated for scholarships; (3) sources outside the control of the institution may provide funds for the payment of scholarships.

The administration of scholarships presents certain difficulties, which will be illustrated by the situation at one of the colleges surveyed. This situation is neither the worst, nor the best that was found, but may be considered typical of the average institution.

The scholastic requirements for scholarship students in this college are much lower than they should be. Freshman students, to become eligible for reappointment as scholars, are merely required to obtain passing grades in twenty-four semester hours of work; sophomore, junior, and senior students must earn grades averaging at least "C" in twelve semester hours each semester in order to become eligible for reappointment. Under the present regulations, it is possible for a student to meet these requirements each year for a period of four years and at the end of that time have to his credit only seventy-two of a total of 120 quality points required for graduation. Under the present rules, it is not uncommon for a student to retain a scholarship for a period of four years and at the end of that time be unable to graduate because he has not earned a sufficient number of semester-hour credits or quality points.

The number of the students holding scholarships at this college constitutes too large a percentage of the entire student body. Many of the scholarships are obviously awarded to students who are by no means outstanding upon the campus, either

in scholarship or in leadership in student activities. Furthermore, a number of the scholarship students are actually trouble-makers. The records on file in the office of the dean for the school year 1924-25 show that the percentage of students referred to this office for violation of the rules of good conduct was larger for students holding endowed scholarships than for students not holding such scholarships.

The administration of loan funds also presents serious difficulties. Careful study has been given this subject by the Student Loan Information Bureau of the Association of University and College Business Officers of the Eastern States.

The funds used for student loans are of two types: (1) the restricted fund; (2) the revolving fund. Funds of each of these types may or may not be under the direct control of the college. Of the funds under the control of the college, the great majority are restricted. A restricted fund is one the capital of which is kept intact, only the income being available for student loans. In contrast to this plan, the revolving fund lends the capital amount of the fund to students. The plan of having the funds under the control of an outside agency instead of under the control of the college may involve the use of a bank or trust company, or an educational foundation as the source of the capital which is lent to students.

It would seem strange that so much of the money given for the purpose of student loans is given as a restricted fund. If the purpose behind such a gift is to help as many students as possible, the revolving type of fund presents great advantages. Mr. L. J. Chassee¹ has pointed out that in a fifteen year period, a fund of \$100,000 loaned under the restricted plan, income only being loaned, would furnish aid to the amount of \$250 each to 375 students; the same capital fund, if loaned under the revolving plan, both capital and interest being used for loans, would furnish \$250 each to 1475 students, almost four times as many as under the restricted plan.

The usual reason for setting up a loan fund of the restricted type is the fear that the capital of the fund may be dissipated

¹A Study of Student Loans and Their Relation to Higher Educational Finance, pub. 1925, by the Harmon Foundation, New York City, p. 92.

through failure of the students to pay their loans. This fear is groundless if the proper administrative safeguards are taken. As a matter of fact the student who receives a loan from a restricted fund is under severe temptation to consider it as a gift, rather than a loan, since he knows that his failure to repay will not seriously impair the ability of the fund to make future loans. It would seem that in seeking gifts for loan funds, givers should be advised to set up a revolving, rather than a restricted fund. The argument with respect to the number of students who can be assisted should appeal strongly to givers of funds.

One of the most important agencies which exist for the provision of student loans, outside the immediate control of the colleges, is the Harmon Foundation of New York City. The Harmon Plan has a dual purpose. Besides the philanthropic desire to assist worthy students to obtain a college education, there is a very marked desire to educate the young man or young woman in matters of personal finance. The whole transaction is on a strictly business basis, and the administrators of the Harmon Foundation feel that their greatest service is in teaching the student the fundamental bases of sound business procedure with respect to credit operations.

The Harmon Foundation loans are administered through affiliated colleges and universities. Institutions are chosen to participate on the basis of (1) need; (2) educational standards; (3) type of school; (4) geographical location; and (5) desire to cooperate in the loan experiment. A student loan committee consisting of three faculty members is formed in each affiliated college. It is the duty of this committee to investigate and approve applications for loans and to assist in the administration of that part of the loan fund granted to the institution.

The first feature of the Harmon Plan is the careful selection of the risks. Students to be granted loans are fully investigated by this faculty committee and information concerning applicants is checked by the central office of the Harmon Foundation before the loan is granted. The prospective borrower must fill out a four-page form of application, which is in itself con-

siderable of an education in personal finance. Among other things called for is a complete budget of the applicant's personal income and expenditures for the past school year and a proposed budget for the current school year.

The second feature of the Harmon Plan is the mutual guarantee system. Each borrower agrees to pay back ten per cent more than the principal of the sum borrowed, in order to set up a reserve to care for possible defaults. After all loans for a given group are either paid off or charged off as uncollectible, the remaining reserve is distributed among the borrowers of the group who have paid their obligations. This scheme results in a mutual responsibility among the group of borrowers, since any defaulter knows that his fellow-borrowers must pay the amount which he fails to pay. The experiment seems to indicate that this is a very effective method of guaranteeing payment of the loans. This group guarantee is perhaps the most outstanding feature of the Harmon Plan.

The third feature of the plan is the repayment in monthly installments of \$10 each. Installment payments are the same regardless of the size of the loan. Ten monthly installments are due each year.

The fourth feature of the plan is the strict follow-up of the payment of loans. Relations are placed on a strictly business basis, notices of installments due being sent out in advance, and every endeavor is made to impress upon borrowers their responsibility for making payments when due. This is a part of the educational phase of the plan. A definite follow-up scheme is provided for, which includes pressure upon those not paying their loans promptly from the college authorities as well as from the mutual guarantee group.

This brief account does not attempt to describe all the details of the plan.¹ The Harmon Plan has been in operation for about five years, and appears to have justified fully the hopes of its founders.

¹For fuller information, reference should be made to the "Report of the Harmon Foundation for 1924-26," and to "Study of Student Loans and Their Relation to Higher Education Finance," by L. J. Chassee. These documents are published by the Harmon Foundation at 140 Nassau St., New York City.

In 1925 Mr. L. J. Chassee, Lecturer in Banking, School of Business, Columbia University, made an investigation of Student Loan Funds for the Association of University and College Business Officers of the Eastern States. This investigation was made under a grant of funds from the Harmon Foundation, and included a thorough study of the present status of loan funds in the various colleges and universities of the country, as well as an exhaustive analysis of the fundamental principles underlying the administration of such loan funds. The investigation was published by the Harmon Foundation as the report of a committee of the Association. In the main the recommendations of this committee support the principles of the Harmon Plan.

The principal features in which this plan differs from the Harmon Plan are: (1) a recommendation that the administration of loan funds be placed in the office of the business manager, with little or no faculty responsibility in the matter; (2) a recommendation that no security be sought other than the signature of the borrower, dispensing with the signature of parents or guardians; (3) a recommendation for the repayment of loans on an amortization plan, differing only slightly from the installment plan; (4) a recommendation that the amount which may be lent to any one borrower be placed at a maximum of \$1,000, enough to "see the student through." Mr. Chassee and the Committee of the Association of University and College Business Officers of the Eastern States, place their approval upon the group guarantee feature of the Harmon Plan, and express the opinion that the feature of the plan placing emphasis on the education of the student in matters of personal finance is particularly praiseworthy.

The Harmon Plan, together with the recommendations from the study of Mr. Chassee, are worthy of a careful study by the executive of every college which is attempting to meet the problem of aiding worthy students. Another plan, which was being proposed at Hiram College at the time of the survey, seems to offer many valuable suggestions, some of which might be utilized with advantage at any college. This policy is described by President Bates as follows:

How wisely to help students of ability and ambition who are without means to secure a college education, is a problem which seems as difficult of solution today as it has been since colleges were founded. The high costs of living and the increasingly exacting requirements of present day curricula make the situation of the student without money even more difficult than it has been in the past.

Three forms of student aid have long been in use, remunerative employment, loans with or without interest, and scholarships or stipends given outright. Within bounds each serves well; out of bounds each often works ill. Almost any student may give from five to fifteen hours a week to remunerative employment with advantage. Few students can give more time to self-support without loss in scholarship, general culture, or health. No student should be asked to pay such a price if it is possible to avoid it. Remunerative employment for an average of one, two, or perhaps three hours a day may be of advantage, not only because of the sum earned, but because such work develops habits of economy, industry, and dependableness.

Loans to a reasonable amount may be made without peril to students who have learned, by earning it, what money costs and, by bearing responsibility, how to use money to good purpose. Loans too freely granted, particularly to inexperienced students, invite extravagance, handicap with debt, and sometimes dishearten or tempt even to the repudiation of just obligations.

Scholarships or stipends may be given outright to students who are doing their full part toward self-support and self-financing, and whose college record justifies the hope that they will return to society superior service. Scholarships too freely granted may pauperize to the irreparable injury of the student.

Inquiry into methods of student aid in various institutions reveals the fact that commonly one of the three forms already mentioned is stressed to the neglect of others, and that no well considered policy of co-ordination seems to have been attempted. In the light of such experience and observation as we have had we venture to submit the following policy of student aid for adoption in Hiram College. We believe that the principles presented are sufficiently definite to prevent the misuse of any one form of student aid and that the proposed machinery of administration is sufficiently flexible to permit the largest good from all forms.

(I) It is proposed that, to every student presenting a good record, remunerative employment shall be offered to the extent of one, two or not to exceed three hours a day; that the quality of the student service shall be graded much as his classroom work is graded:

- A—The student who does well all he is told to do and more
- B—The student who does faithfully and well all he is told to do
- C—The student who is fairly thorough and dependable
- D—The student whose work is tolerable only

Let the hourly wage be according to the grade of work, and let promotion to the better and more responsible jobs depend upon the student's record. By this means industrious students of good ability may earn from one-fifth to one-third of the year's expenses without peril to scholarship or health.

(II) It is proposed that every student who has made a good record in the classroom and in work for self-support shall be recommended to a bank for such a loan at the regular interest rate as his need may require, not to exceed the total he has earned during the preceding twelve months. The student is thus permitted to finance himself in part, but never beyond the amount he has proven his ability to earn. The loan is made on a strictly business basis. For many reasons it seems better that the student should deal with a bank rather than with the College or with an individual. Upon the deposit of any stated sum by the College a bank will be justified in loaning to students recommended by the College, a total of four or five times the sum deposited as security. Banks would, of course, require for their further protection insurance policies and character endorsements.

(III) It is proposed to grant to any self-supporting and self-financing student who may rank in the upper fifth of his class an outright scholarship not exceeding the amount he may that year be earning or borrowing, or paying in tuition and fees, and to any student ranking in the second fifth of his class a scholarship for one-half the sum allowed a student in the upper fifth. Scholarships are thus made available to superior students only and to them only when they are doing their full share toward supporting and financing themselves. The student thus earns his right to the scholarships and is in no danger of being pauperized. This plan would seem to make impossible any unfair discrimination in the awarding of scholarships.

Such a co-ordination of the three forms of student aid gives a reasonable guarantee that each form of aid will be used within reasonable bounds and in a way to cause neither injury nor undue hardship to the student receiving it. Furthermore, such a co-ordination should bring a college education within the reach of every student of ambition, good health and good ability.

From the standpoint of the College such a co-ordination would seem to offer the largest possible service for the amount of money invested. Student labor should bring full return for all that is expended. Loans by the bank to students selected in the manner described should result in minimum losses. These losses, of course, must fall upon the College. The one considerable expense will be for scholarships. It would seem that the method of selection proposed would insure the granting of scholarships to those students only who have real need and who, because of superior ability and self-reliance, give promise of largest usefulness to society.

The policy proposed is absolutely democratic. It recognizes no preferred class save that of the superior student. It permits, however, the free use of all scholarships now in force and restricted to one sex or to students preparing for a particular vocation. Our hope is that such considerable sums for student aid may be entrusted to the College without restriction as will permit the giving of help impartially to all worthy students regardless of their chosen callings, of sex, or of any like consideration.

It is recommended that the administration of all funds for student aid be entrusted to a standing committee composed of the President, the Deans, the Treasurer, and the Superintendent of Buildings and Grounds. The persons named ought together to have the most complete knowledge of the student's work, needs, and character. It is further recommended that they be instructed to administer all student aid funds in the spirit rather than in the letter of this plan; that variations from the rules laid down be approved when and only when such variations seem more completely in keeping with the principles and aims of the policy as a whole.

Donors to the "Student Aid Foundation" may designate that the income of their gifts be used to pay for student labor, to secure loans, or to provide scholarships. Undesignated sums, the income of which may be used from year to year, wherever experience may reveal the greatest need, will be particularly useful. The fund itself should, of course, be under the care and control of the Finance Committee as are all other College funds.

No attempt will here be made to criticize either the Hiram plan, or the plans of Mr. Chassee and the Harmon Foundation. The various plans are indicated here simply in order that institutions may have a basis for criticising their own methods of aiding students. The Board of Education of Disciples of Christ has recommended the adoption of the principles of the Harmon Plan by the institutions affiliated with it in the administration of their loan funds.

The question as to whether the aid should be given as a scholarship, or as a loan demands some attention. The decision on this point involves a fundamental analysis of the value of an education. If the philosophy of an institution regards the education it is giving the young people of the generation as a contribution to society, with society later to reap the rewards of the education that has been given, the natural suggestion is a scholarship for the needy student. On the other hand, if education is viewed as an individualistic matter, of worth primarily to the individual in enabling him to earn more money and

enjoy more of the comforts of life, it is only fair to ask the individual to pay for the cost of his education, and aid to needy students naturally takes the form of a loan. Perhaps no institution follows either of these philosophies in the extreme form; but as varying emphasis is placed upon the social and the individualistic aims of higher education, just so must the emphasis be shifted between scholarships and loans funds as a method of aiding needy students.

It is believed that most institutions will find a place for both scholarships and loan funds. The degree to which each will be employed will vary with the aims and purposes of the institution, the type of training it gives, and the general status of its student body. Differentiation as to which students should receive each form of aid can be made along several lines. For example, students preparing for a type of life work, the advantages of which accrue mainly to society as a whole rather than to the individual, for work which is socially important yet rewarded by a relatively low salary, or work in fields in which the demands for workers exceed the supply, might well be given scholarships. On the other hand, students preparing for work which is not socially important, for work the rewards of which come to the individual in terms of high salary, or for work in fields in which the supply of workers exceeds the demand, should be financed by loans. A student who gives no promise of better than average ability should never be financed by scholarships, since his potential contribution to society is limited by his ability. On the other hand, such a student may be entirely eligible for aid in the form of a loan, providing only that his ability is just high enough to leave some assurance that he will be able to profit by the education for which he is being financed.

Summary

The tendency to increase student fees brings to the foreground the problem of some sort of aid for worthy students who are financially unable to pay the high fees. Three possible methods of aid are in use: (1) remunerative employment furnished by the institution; (2) scholarships; (3) loan funds. Each of

these methods needs a carefully controlled administration, and the decision of the institution to place primary emphasis upon one or the other must be made in the light of the aims and purposes which the institution has, together with the type of its student clientele. The Harmon Foundation Plan of student loans is worthy of careful consideration. The administration of scholarships must be protected from such abuses as the granting of scholarships to students who do not give promise of unusual ability, the granting of scholarships to students because of athletic ability, and the maintenance of too large a proportion of the student body on a scholarship basis.

CHAPTER XV

ECONOMIC FACTORS AFFECTING THE SUPPORT OF INSTITUTIONS OF HIGHER LEARNING

Most institutions of higher learning tend to be more or less local in character, deriving the major portion of their supporting revenue, as well as the major portion of their student enrolment, from within the states in which they are situated. It is true that the financial support of any educational institution, whether publicly or privately controlled, must come primarily out of the total supply of economic energy of the state in which the institution is situated. The measurement of the relative ability of a state to support its schools is a difficult matter. In general, it may be said that the ability of a state to support its educational system, i.e., the surplus economic energy available for purposes of education, is directly proportional to the economic resources of the state.

In order to reach a decision as to the ability of a state to support education, the economic strength of a state must be determined. The measurement of relative ability necessitates a comparison of the resources of states in terms of the property from which revenues are derived, as well as in terms of the incomes of the residents of the states. Income is one of the best single measures of economic ability. Wealth, however, is an index of sufficient importance to warrant some consideration, as is indicated by the fact that the committee appointed by the National Tax Association to prepare a plan for a model system of state and local taxation, accepted tangible property as one of the bases of its model plan for raising revenues in the state.

From the estimates of wealth compiled for 1922 by the United States Bureau of Census,¹ and the estimates of income pre-

¹Wealth, Public Debt, and Taxation: 1922. Estimated National Wealth. Published 1924 by United States Department of Commerce, Bureau of Census, Washington.

pared by the National Bureau of Economic Research¹ it is possible to obtain data relating to the ability of the several states to support education. Data for those states² in which institutions holding membership with the Board of Education of Disciples of Christ are situated are presented in Table 74.

TABLE 74. WEALTH AND INCOME PER CAPITA¹ AND INDEX OF ECONOMIC ABILITY OF THE UNITED STATES, AND OF THE FIFTEEN STATES IN WHICH INSTITUTIONS AFFILIATED WITH THE DISCIPLES BOARD OF EDUCATION ARE LOCATED

STATE	TANGIBLE WEALTH PER CAPITA	ESTIMATED INCOME PER CAPITA	INDEX OF ECONOMIC ABILITY PER CAPITA ²
United States	\$2,989	\$627	\$ 926
Alabama	1,278	306	434
California	4,386	899	1,338
Illinois	3,428	769	1,112
Indiana	3,013	570	871
Iowa	4,372	563	1,000
Kentucky	1,482	380	528
Missouri	2,932	551	844
Nebraska	4,104	555	965
North Carolina	1,775	353	530
Ohio	3,210	689	1,010
Oklahoma	1,969	504	701
Texas	2,112	512	723
Virginia	2,118	403	615
Washington	3,776	701	1,079
West Virginia	3,196	487	807

¹The data representing population are based on the Fourteenth Federal Census of Population, Bureau of Census. The value of tangible wealth is from the Federal Census of Wealth. Income data are from the Research Bulletin of the National Education Association, *Major Issues in School Finance, Part II*. The total income in the United States was estimated on the basis of the best data available. This total was distributed among the states of the union on the basis of the average of the total national income found in the several states in the years 1919 and 1920 as estimated by the National Bureau of Economic Research.

²The index of economic ability represents the income plus one-tenth of the tangible wealth.

¹Income in the Various States. Its Sources and Distribution, 1919, 1920, and 1921, by Maurice Leven, published 1925 by National Bureau of Economic Research, Inc., New York.

²At the time of the compilation of these data, Disciples institutions were maintained in the fifteen states for which figures are given. Very recently the institution in Alabama has ceased to operate, and an institution has been opened in the state of Kansas. Accordingly the data given do not exactly represent the situation at the present moment.

FIG. 18. TANGIBLE WEALTH PER CAPITA FOR THE UNITED STATES AND FOR THE FIFTEEN STATES HAVING DISCIPLES INSTITUTIONS, FOR 1923

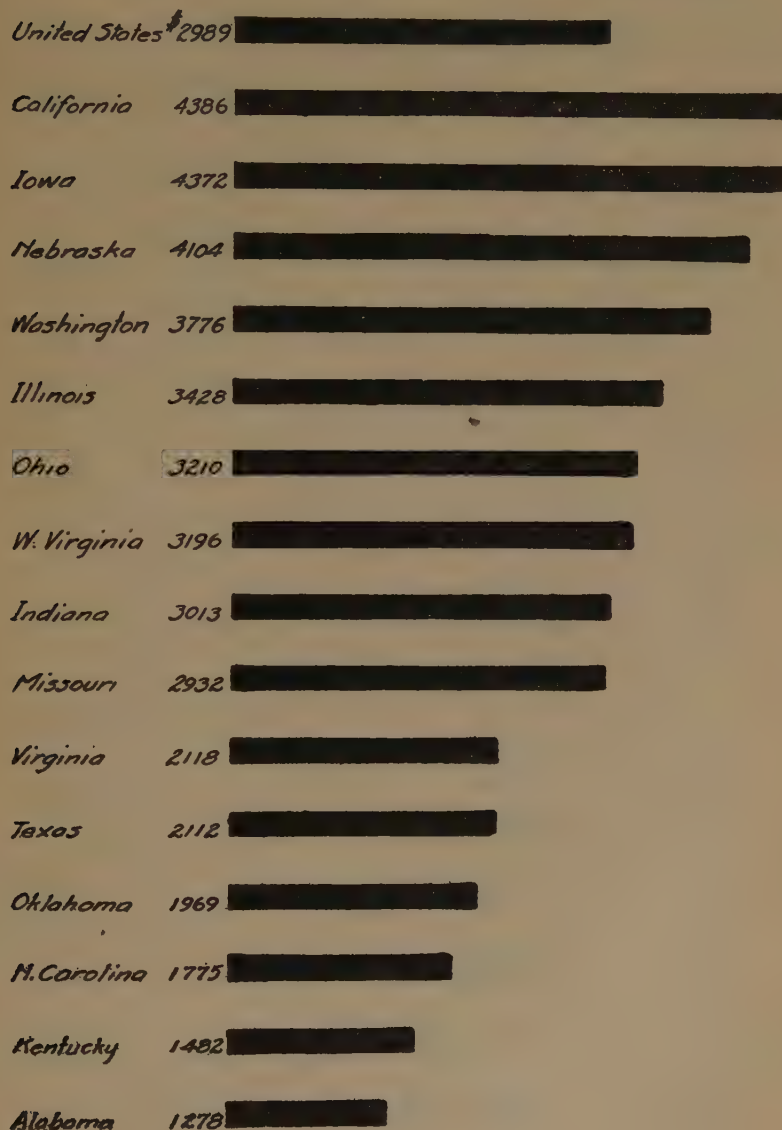


FIG. 19. ESTIMATED INCOME PER CAPITA FOR THE UNITED STATES AND FOR THE FIFTEEN STATES HAVING DISCIPLES INSTITUTIONS, FOR 1924



FIG. 20. INDEX OF ECONOMIC ABILITY PER CAPITA FOR THE UNITED STATES
AND FOR THE FIFTEEN STATES HAVING DISCIPLES INSTITUTIONS

<i>United States</i>	\$926	
<i>California</i>	1338	
<i>Illinois</i>	1112	
<i>Washington</i>	1079	
<i>Ohio</i>	1010	
<i>Iowa</i>	1000	
<i>Nebraska</i>	965	
<i>Indiana</i>	871	
<i>Missouri</i>	844	
<i>W. Virginia</i>	807	
<i>Texas</i>	723	
<i>Oklahoma</i>	701	
<i>Virginia</i>	615	
<i>N. Carolina</i>	530	
<i>Kentucky</i>	528	
<i>Alabama</i>	434	

Figures 18, 19, and 20 are based upon the data presented in Table 74. Figure 18 shows the tangible wealth per capita for 1922. Figure 19 shows the estimated yearly income per capita for 1924, and Figure 20 shows the index of economic ability per capita.

An examination of the data presented in Table 74 and on Figures 18, 19, and 20 shows that considerable variation exists among the states with respect to ability to support education, as measured in terms of tangible wealth per capita and estimated income per capita. Those states with small wealth and low incomes find it difficult to support an efficient educational system.

In the case of institutions supported largely by religious communities the ability to support the educational program is dependent to a considerable degree upon the number of communicants in the territory assigned. In the case of the Disciples institutions, by mutual consent certain territorial assignments have been made and each institution is given the responsibility for cultivating the territory assigned to it. Institutions making campaigns for funds are expected to limit their general solicitation to the territory assigned to them, but are privileged to solicit former students, alumni, and friends wherever located.

Table 75 shows the total church membership, and the total church membership per institution in the territories assigned to the Disciples institutions, and the index of economic ability per capita of the states in which the respective institutions are located.

A glance at the data presented in Table 75 makes it apparent that some institutions will find it much more difficult to obtain support than others. The institutions and groups of institutions represented are arranged in the order of the data presented in the second column representing the total church membership per institution. It will be noted that the membership ranges from 132,990 for Hiram College to only 21,121 for Spokane University. This difference represents a ratio of more than six to one in favor of Hiram College. Furthermore, the index of economic ability for the state in which the institutions

TABLE 75. TOTAL CHURCH MEMBERSHIP, CHURCH MEMBERSHIP PER DISCIPLES INSTITUTION, AND INDEX OF ECONOMIC ABILITY PER CAPITA OF THE POPULATION OF THE STATE IN WHICH THE INSTITUTIONS ARE SITUATED¹

INSTITUTION OR GROUP OF INSTITUTIONS	TOTAL CHURCH MEMBERSHIP IN THE TERRITORY ASSIGNED	AVERAGE CHURCH MEMBERSHIP PER INSTITUTION	INDEX OF ECONOMIC ABILITY PER CAPITA OF STATE
Hiram College	106,680	106,680	\$1,010
Phillips University	122,268	122,268	701
Cotner College	80,486	80,486	965
Indiana Institutions	160,436	80,218	871
Drake University	77,715	77,715	1,000
Bethany College	73,276	73,276	807
Illinois Institutions	133,003	66,501	1,112
Lynchburg College	51,200	51,200	615
California Christian College	51,071	51,071	1,338
Kentucky Institutions	145,844	48,614	528
School of Religion at Tuscaloosa	41,238	41,238	434
Atlantic Christian College	35,785	35,785	530
Spokane University	29,561	29,561	1,079
Texas Institutions	78,980	26,326	723
Missouri Institutions	153,921	25,653	844

¹The data for church membership are taken from the 1926 Year Book, Disciples of Christ. The index of economic ability for the United States is \$926.

are located is only slightly greater in the case of Spokane University than in the case of Hiram College. Institutions such as Atlantic Christian College and the Kentucky institutions, although having larger church memberships per institution than Spokane University, find it extremely difficult to obtain adequate funds with which to maintain standard programs of work because the economic ability of the states in which these institutions are located is so low. Both North Carolina and Kentucky have indices of economic ability per capita less than half that for the United States.

Relationship Between Ability and School Expenditure

Table 76 and Figures 21 and 22 are designed to show the relationship between the ability of states to support education and the support given. Table 76 shows the wealth per capita, income per capita, receipts of institutions of higher learning

per capita, and total of school costs (for elementary, secondary, and higher education) per capita of total population for the United States and for each of the fifteen states. Figure 21 is based on the data presented in Tables 74 and 76 and shows the relationship between the index of economic ability of the states and the total school costs per capita of population. Figure 22 is also based on the data presented in Tables 74 and 76, and shows the relationship between the index of economic ability of the states and the receipts of universities, colleges and teacher training institutions per capita. As explained in connection with its use in Table 74, the index of economic ability employed is the income plus one-tenth of the tangible property valuation.

TABLE 76. WEALTH PER CAPITA, INCOME PER CAPITA, RECEIPTS OF UNIVERSITIES, COLLEGES, AND TEACHER-TRAINING INSTITUTIONS PER CAPITA, AND TOTAL SCHOOL COSTS PER CAPITA FOR THE UNITED STATES AND EACH OF FIFTEEN STATES¹

STATE	TANGIBLE WEALTH PER CAPITA 1922	INCOME PER CAPITA 1924	RECEIPTS OF UNIVERSITIES, COLLEGES AND TEACHER- TRAINING INSTITUTIONS PER CAPITA, 1923-1924	TOTAL SCHOOL COSTS PER CAPITA 1923-1924
United States	\$2,989	\$627	\$3.67	\$22.19
California	4,386	899	5.93	43.37
Iowa	4,372	563	5.93	27.15
Nebraska	4,104	555	3.97	25.94
Washington	3,776	701	3.38	24.99
Illinois	3,428	769	3.86	24.10
Ohio	3,210	689	3.47	26.61
West Virginia	3,196	487	2.69	18.33
Indiana	3,013	570	3.29	21.69
Missouri	2,932	551	3.02	17.21
Virginia	2,118	403	4.10	13.06
Texas	2,112	512	3.17	15.27
Oklahoma	1,969	504	2.53	18.71
North Carolina	1,775	353	3.76	16.17
Kentucky	1,482	380	1.88	9.18
Alabama	1,278	306	1.70	8.02

¹Tangible Wealth Per Capita and Income Per Capita are from sources indicated in Table 74. Other data are based upon publications of the U. S. Bureau of Education or from information furnished by the Bureau.

FIG. 21. INDEX OF ECONOMIC ABILITY PER CAPITA AND TOTAL SCHOOL COST PER CAPITA

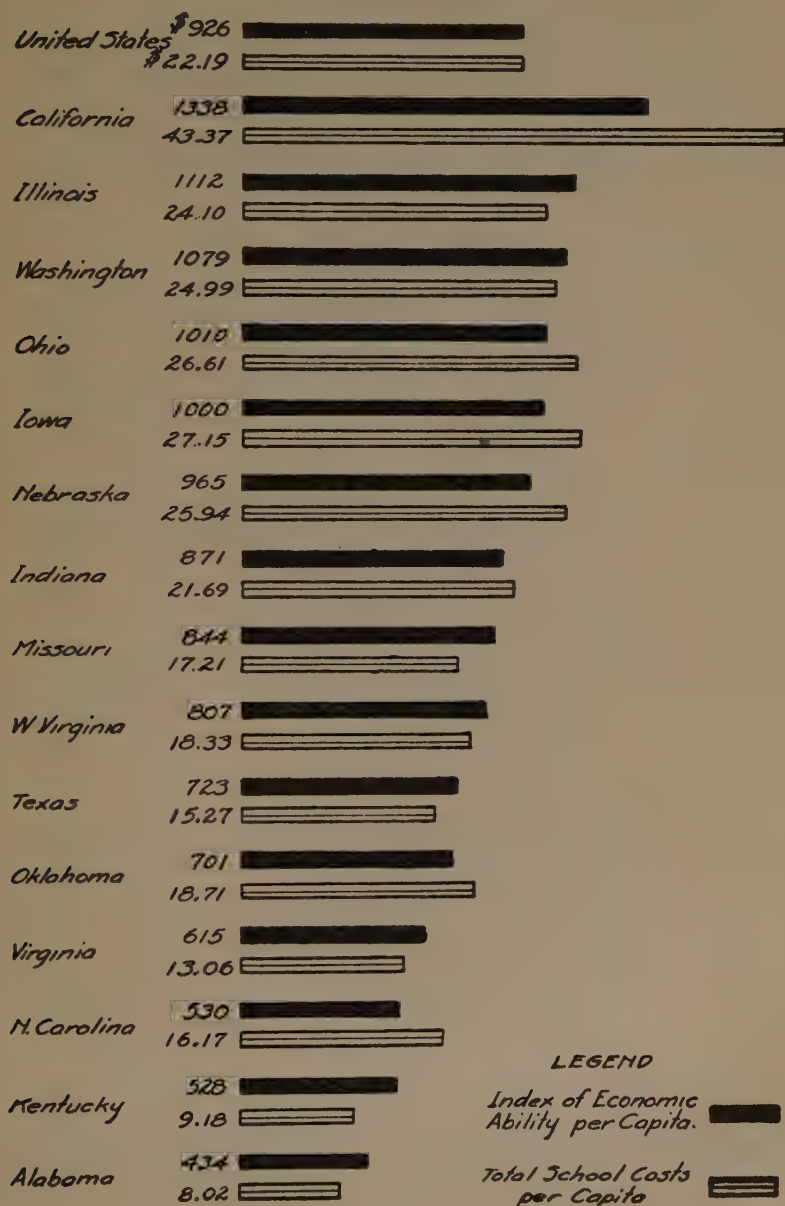
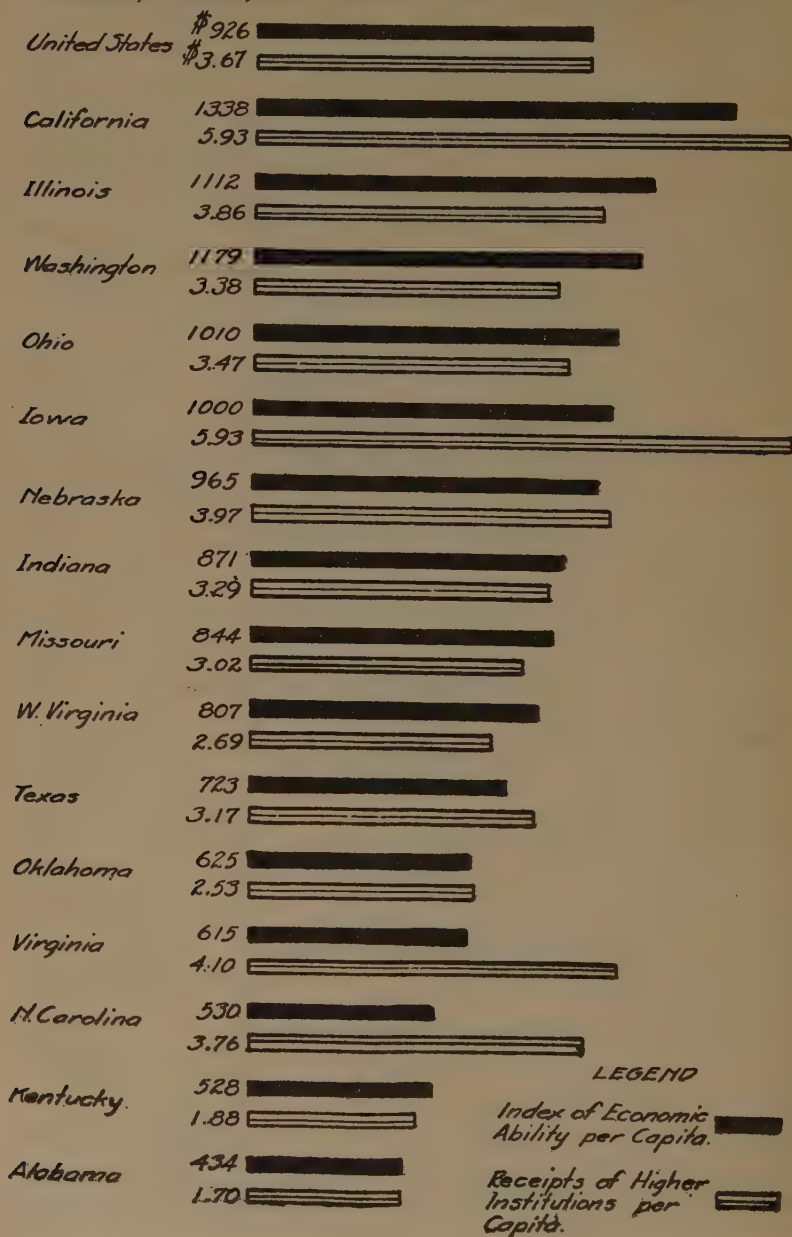


FIG. 22. INDEX OF ECONOMIC ABILITY PER CAPITA AND RECEIPTS OF UNIVERSITIES, COLLEGES, AND TEACHER-TRAINING INSTITUTIONS PER CAPITA



An examination of Table 76 shows that considerable relationship exists between tangible wealth per capita and income per capita on the one hand, and receipts of universities, colleges, and teacher-training institutions per capita and total school costs per capita upon the other. Their relationship is made clearer by the comparisons in Figures 21 and 22, where wealth and income are combined into an index of economic ability. Figure 21 shows that of the fifteen states represented, every state which has an index of economic ability per capita higher than that for the United States also has a total school cost per capita above that for the United States, and that every state which has an index of economic ability per capita lower than that for the United States also has a total school cost per capita below that for the United States. The relationship between the index of economic ability per capita and receipts of universities, colleges, and teacher-training institutions per capita is not so close as that between the index of economic ability per capita and total school costs per capita. Iowa, Virginia, and North Carolina all have receipts per capita much higher than would be expected, in view of their indices of economic ability per capita. However, considering the group of fifteen states as a whole, it is apparent that considerable relationship exists between the index of economic ability per capita of a state and the receipts of institutions of higher learning in the state.

The Relation of Financial Support to the Future of the College

Obviously these statistical measures of ability to support education are, in the case of any given institution, of general implication only. The most important condition which may modify the influence of the general economic status of the supporting constituency of a college is the presence of a few wealthy persons of philanthropic inclinations, who are interested in the institution and in sympathy with its policies.

The administrators and faculties of colleges should face courageously the question of the ability of their particular constituencies to finance a satisfactory program of higher education. When a thorough canvass of the resources available fails to

reveal the possibility of adequate financing, justice, both to the students and the constituency, demands that the institution cease to operate.

Summary

Most institutions of higher education tend to be more or less local in character, deriving the major portion of both income, and student enrolment from within the states in which they are located. The financial support which a college may expect to receive is therefore dependent directly upon the economic status of the commonwealth in which the institution is located. The measures of economic ability used in this report are wealth and income. Data for wealth and income show that many of the institutions surveyed cannot well avoid being handicapped by financial limitations.

Data regarding expenditures of the various states for the purposes of public education show a considerable relationship between economic ability and contributions to public education, both at the elementary and secondary school level and also at the collegiate and university level. Since the support of public higher education is directly related to the economic ability of the commonwealth, it is highly probable also that the support of higher education of a non-public character will be influenced by the same force.

When a thorough study shows that there is, in the case of a particular institution, no justifiable hope of adequate financial support, the college should take immediate steps to close its doors.

CHAPTER XVI

THE PRESENT STATUS OF THE INSTITUTIONS

In this final chapter there will be pointed out a few deficiencies of a general type which have not been mentioned under the topics previously discussed. The major emphasis of this chapter, however, will be devoted to an analysis of the recent improvements at the colleges, many of which are direct outcomes of the survey program.

Educational Deficiencies

The educational deficiencies of the colleges have been discussed in considerable detail throughout this report. Some of these deficiencies can be traced to a lack of sound educational and financial training upon the part of those in charge of administration of the institutions. Others are due to a narrow conception, upon the part of those in authority, of the purposes of institutions of higher learning.

Perhaps the chief difficulties of the colleges through the years have been their local independence and their lack of funds for adequate support. The weaker colleges are still at the point of beggary. Many of the older institutions have had for years to limit greatly their educational programs. Because of this lack of funds it is not fair to place the major responsibility for the shortcomings of these institutions upon the institutions themselves. The conclusion that these shortcomings should be placed not upon the institutions, but upon the supporting communion is inevitable.

Recent Improvements

Throughout this report considerable attention has been given to a discussion of the deficiencies of the institutions surveyed. Regardless of the indictments which have been made, almost all of the institutions during recent years have been constantly and rapidly changing for the better. A number of the most important of the changes made are as follows.

1. Improved Physical Facilities.

During the four-year period from 1922 to 1926 the value of buildings and grounds of the group of Disciples colleges and universities increased thirty per cent. Even greater increases, relatively, have occurred in the value of the instructional equipment of these institutions. Since 1922 the value of the working libraries has been increased 100 per cent for the institutions as a group.

2. Increased Utilization of Buildings.

Prior to the time the surveys were made, there had been apparent a marked tendency for the institutions to plan extensive building programs, and in some instances to spend for buildings funds which ought to have been expended for instructional equipment and faculty salaries. The survey reports showed clearly that the degree to which space was being utilized in a majority of these colleges was very low. A study of the survey reports by officers of administration of the colleges and universities led some of the institutions to study more carefully their schedules of classes. Reorganized class schedules made it possible for these institutions to care for increased enrolments without increased expenditures for new buildings. Thus, funds which otherwise would have been expended for new buildings were made available for faculty salaries and other instructional expenditures.

3. Improved Curricula.

As late as 1920 most of the colleges surveyed offered very little work in the social sciences other than history. Many of them gave no courses in economics, sociology, political science, or political economy. Some gave a few hours of work in only one or two of the four subjects mentioned. Most of the courses offered in these fields were intended primarily for juniors or seniors. Junior-college students gave much of their time to a study of relatively elementary courses in foreign languages. However, recent years have witnessed marked increases in the offerings in all divisions of the social science field, as well as the

opening of courses for junior-college students. These changes are in line with modern curricular trends in higher education.

4. *Improved Standards.*

In 1911 there was no college or university among the Disciples institutions whose graduates could classify as graduate students without condition at the better graduate schools of America. Graduates of all of these institutions but two, Drake University and Butler University, were with few exceptions required to take work at graduate institutions for two years in order to receive the degree Master of Arts.

The American Council on Education in 1920 prepared a list of colleges in the United States recommended as preparing students for post graduate study in foreign universities. This list was a compilation of the institutions having memberships in or accredited by the North Central Association of Colleges and Secondary Schools, the Association of Colleges and Secondary Schools of the Southern States, the Association of American Universities, and the University of California. Upon this list were five of the institutions of the Disciples: Butler College, Drake University, Hiram College, Transylvania College and Cotner College. Butler, Drake, and Hiram were included because they held membership with the North Central Association of Colleges and Secondary Schools, Transylvania because it held membership with the Association of Colleges and Secondary Schools of the Southern States, and Cotner because it was accredited by the University of California.

Since 1920 the requirements of the regional standardizing associations have been raised markedly, yet ten of the four-year institutions and two of the junior colleges of the Disciples of Christ now hold membership with either the North Central Association of Colleges and Secondary Schools or the Association of Colleges and Secondary Schools of the Southern States.

5. *Reduction in the Number of Different Degrees Awarded by Institutions.*

For a number of years educational standardizing associations and other educational organizations have discouraged the con-

ferring of a multiplicity of degrees. It is generally agreed that small institutions should confine themselves to the awarding of only one or two degrees. Ten years ago courses leading to from four to eight different degrees were advertised in a majority of the colleges. Most of the colleges which formerly followed this practice, however, are now limiting the number of degrees which they award to two or three.

6. Improved Situation with Respect to Graduate Work.

In 1920 a majority of the four-year colleges advertised graduate programs; yet, none of these institutions offered courses designed primarily for graduate students. Graduate students were put in classes with senior college students, and in many cases, with junior-college students. Some institutions awarded the degree Master of Arts without requiring any residence work in addition to that required for a Bachelor's degree. Since 1920 most of the weaker institutions have ceased to offer any work at the graduate level. The colleges and universities which still offer such work limit their offerings, in general, to one or two fields, most commonly the fields of religion and education; some of these institutions have so strengthened their programs in these fields that a relatively satisfactory grade of graduate work is now being carried on.

7. Discontinuance of Preparatory Work.

With the exception of the junior colleges, practically all work below the level of the college freshman year has been discontinued by Disciples institutions. Ten years ago all but a few of these colleges had preparatory departments.

8. Better Trained Faculties.

It would be desirable if many of the staff members of the institutions had had more graduate training than they have had; however, the staffs are now much better trained than they were seven years ago. Since 1921 the per cent of the teachers in Disciples colleges with Ph.D. degrees has more than doubled. During this period, also, the per cent holding either M.A. or Ph.D. degrees has increased one-half. Seven years ago approximately twenty-five per cent of the teachers employed by these

institutions were teachers without degrees. At the present time the number of teachers without degrees is so small as to be negligible.

9. Improvements in Teaching Loads.

The increases in the enrolments which have occurred during recent years have not resulted in increased service loads upon the part of staff members. Although the average size of classes is greater now than it was seven years ago, the number of very large classes has not increased. However, the number of very small classes has decreased greatly in many of the institutions. One result of these changes is that the average teaching load of staff members in terms of hours of classroom and laboratory work, has actually been reduced since 1921. Due to the reduction in teaching hours, and the increased size of the average class, it has been possible to increase greatly the contribution of staff members without increasing their total service loads. From every point of view, these changes have been desirable except in a very few institutions where the ratio of students to teachers is somewhat larger than it ought to be for thoroughly effective work.

10. Improved Business Methods.

The economic pressure brought upon colleges and universities by increased costs has led to determined efforts to bring about more careful institutional bookkeeping and budgeting. A few years ago practically none of the institutions had accounting systems which enabled them to compute the actual cost of conducting their programs; now, more than half of them have developed systems which make possible the computation of educational costs. Approximately half of the institutions now keep capital accounts, although only two of them kept such accounts in 1922. When the first survey of this series was made four years ago, only two of the institutions were operating under a budget plan; now, more than half of them have adopted the budget plan of control. In 1920 almost half of the institutions had not yet adopted the plan of having audits made by a certified public accountant; now, all but two

of the institutions have adopted the plan of having such audits made annually. Until recently it was not uncommon for privately endowed colleges and universities to misuse their endowment funds, either by expending these funds for current instructional costs and for buildings, or by using endowment securities as collateral for borrowing funds with which to pay current expenses. During the decade prior to 1923 a majority of the institutions misused funds in this manner. However, since 1923 much of the endowment which had been hypothecated during previous years has been restored, and a majority of the institutions have taken steps to prevent such transactions in the future.

11. Efforts to Improve Instruction.

With relatively few exceptions the instructional techniques customarily employed in the colleges are still of a crude "rule-of-thumb" type; it has only been in very recent years that there has been any attempt to evaluate these instructional techniques scientifically. However, many institutions are now beginning to use scientific methods of investigation in the study of instructional procedures. A few of the newer ideas being tried out in some of the colleges, which will be described briefly, are as follows:

- (1) Classroom inspection and supervision of instruction
- (2) Reports on efficiency of teaching
- (3) Administrative devices for individualizing instruction
- (4) Studies of the classification of students, student load, and duplication of content of courses
- (5) Orientation programs
- (6) Ability grouping
- (7) Experimentation with the use of certain classroom devices, such as:
 - (a) the lecture-demonstration method for science classes
 - (b) objective testing
 - (c) student-teacher cooperative investigation
 - (d) individualization of instruction
- (8) Education courses for faculty members

The number of institutions attempting classroom supervision is relatively small. California Christian College, a four-year institution, and Christian College in Missouri, a junior college, are examples. The general practice is to place the supervisory activities in charge of a dean trained in the field of professional education.

A number of the institutions have attempted to check the efficiency of teachers by means of student and alumni reports. In some cases students and alumni are asked merely to rank their instructors or former instructors upon the basis of their best judgments as to instructional efficiency. A method of procedure more frequently employed is to have students and alumni score the teachers upon the basis of a number of points selected as factors contributing to efficiency in instruction.

At a majority of the institutions where students or alumni or both have been asked to rate their instructors, satisfaction with the results obtained has been expressed by the officers of administration. Two of the presidents expressed the opinion that the judgments of alumni are of greater value than the judgments of students, because there may be a greater tendency for students to allow temporary prejudices to obscure their judgments. Furthermore, alumni who have been out of school for some time will have had an opportunity to evaluate the instruction which they have received, in terms of the needs of adult living.

Administrative devices for individualizing instruction are being used by an increasing number of colleges. The device most frequently employed is some form of the so-called "honors-course." At most institutions having honors courses, these courses are open only to students of the junior and senior years.

Some of the colleges establishing honors course programs have adopted, with certain modifications, the Swarthmore College plan. The essential elements of this plan have been set forth in the following statement:

"Honors students are excused from the ordinary examinations and course requirements. Instead, they are expected to

spend two years in mastering a certain definitely outlined field of knowledge over which they are examined at the end of their two years' work. Their instruction is mainly individual, and a large part of their work is done independently by their own reading."

The honors course plan of other institutions differs from that of Swarthmore in that honors students take courses with other students and, in addition, carry on special investigations in some field of concentration. At all institutions offering honors courses, the plan includes a general final examination in the field of concentration.

Studies of the classification of students, student load, and the content of courses have been made by a number of the colleges and universities investigated. These have been reported in other chapters of this volume.

The development of orientation courses has resulted in considerable improvement in teaching methods. The basic features of this type of course were discussed in Chapter V.

Ability grouping is an administrative procedure employed by approximately one-third of the institutions visited to provide for individual differences of students enrolled in the freshmen and sophomore years. At some institutions the basis of sectioning classes is the so-called intelligence test; at other institutions, subject-matter tests are employed for this purpose. A few colleges employ both intelligence tests and subject-matter tests for purposes of student classification. Although most of the institutions where classes have been sectioned upon the basis of ability report that the plan is helpful, there seems to be little evidence of any attempt to measure objectively the effectiveness of such sectioning. There is need for measurement of this type.

At Transylvania College, experimental work is being carried on in an endeavor to evaluate the relative efficiency of the lecture-demonstration method of teaching first year chemistry in comparison with the usual laboratory method. Although the investigation is as yet incomplete, the evidence to date seems to indicate that the lecture-demonstration method of

instruction may be as valuable as the laboratory method for those students who do not plan to specialize in chemistry. If further data should support this tentative conclusion, one result would be a material reduction in the cost of science instruction.

Objective tests are being used to supplement the older essay type of examination by several departments in a number of colleges. The use of the new-type tests has increased markedly during the past three or four years, resulting in considerable improvement in the examination methods.

The plan of student-teacher cooperative investigation was developed at The College of the Bible by former Dean William Clayton Bower, and is now being continued in some classes at that institution. Under this plan instruction is carried on by means of conferences and laboratory work. The physical setting of a conference-laboratory room is required. Through an agendum committee the class group shares with the teacher the responsibility for formulating at the beginning the central problem of the course, for breaking up the central problem into its subsidiary problems, and for formulating agenda as the basis for the investigation of each subsidiary problem. Subcommittees are responsible for searching the literature on a given problem and for revising a cumulative card index of sources. All the members of the group search the basic sources for data as a basis of cooperative thinking and arriving at criticized results. The findings on each agendum are recorded by members chosen by the group, and the total findings are edited and mimeographed. The technique of this instructional method has found rather wide reception in schools of religious instruction.

A number of institutions report various kinds of classroom devices for individualizing instruction. Sometimes pre-tests are administered at the beginning of the term and students are excused from those sections of the course with which they are already sufficiently familiar to pass the test. The pre-test may be described as a final examination of objective nature given at the beginning of the term instead of at the end of the term.

Some institutions excuse students from taking certain preliminary courses in English upon the basis of grades earned upon tests given at the beginning of the term.

Attendance upon education courses is another device finding wide favor in the efforts of the colleges to improve instruction. Courses to meet this demand are being developed in several of the graduate schools of the country. At some of the colleges the administration has brought pressure to bear upon younger faculty members to attend such courses.

In illustration of how an institution may organize its faculty for the improvement of instruction, the program now under way at Christian College in Missouri will be described in some detail.

At the first faculty meeting of the year, held prior to the opening of the session, the discussion centered around the importance of professional study and growth. An outline program of faculty meetings was then presented to the teachers by the Dean of Faculty, and a program committee was appointed. Announcement was made that faculty meetings would be held twice each month, one meeting to be given over entirely to a discussion of professional topics, and parts of the other meeting which were not needed for administrative purposes to be devoted to professional study. The teachers were informed also concerning a professional library which was to be made available for their use. Ten books were selected for study and three or four copies of each of the more important books were purchased.

At the first professional meeting a mimeographed copy of the results of the freshmen intelligence tests was placed in the hands of each teacher. The hour was given over to a discussion of the interpretation, significance, and use of these tests.

The second and third professional meetings were used for discussions of *The American Arts College*, written by Kelley. The topics which incited the most interest were the measurement of instruction and personnel management. So much interest and such a diversification of opinion resulted from these discussions that the program committee arranged to devote one

additional meeting to each topic. Dr. Luther T. Purdom, the personnel director of the University of Missouri, was invited to conduct a discussion on personnel management. He presented the results of several experiments and studies. After his presentation, the meeting became an open forum for discussion.

At the meeting given over to a discussion of measurement, a study was presented of the distribution of grades at Christian College, and several contributions to the literature in the field of measurement were discussed.

At the following meeting Part I of Morrison's book, "The Practice of Teaching in the Secondary Schools," was studied. The discussion centered around the new conception of secondary education. Following this discussion the Dean presented the programs prepared by the committee for the remainder of the year. He explained that the committee had decided that the faculty members were sufficiently familiar with the professional literature to enable them to make some practical applications to their own classroom situations. The plan proposed called for a presentation by selected faculty members of a discussion of modern tendencies in their own particular subjects, and the use made of scientific technique. The hope was expressed that the one presenting the subject would make professional growth by being called upon to state definitely, and to defend his course, and also, that those listening would make professional growth by securing better understanding and more respect for the subject of a co-worker.

Early in the first semester the Dean of Faculty began to visit classrooms. The teacher was notified the day before his class was to be visited. The class was observed for the entire period. A few notes were made by the Dean after his return to the office. The teacher was invited to the office for a conference. First, the strong points of the lesson were spoken of briefly, then suggestions as to possible methods of improvement were discussed. A splendid spirit on the part of teachers has been accorded and class visitations have actually been requested by the teachers from time to time. The officers of administration

of Christian College report that the program for the improvement of instruction has had the following results: (1) an improved professional spirit, manifested by increased interest in faculty meetings; (2) increased use of objective tests; (3) improvement in the distribution of grades; (4) the development of plans for some form of personnel directing agency; (5) requests from teachers for an extension class in college teaching methods to be conducted by the University of Missouri; and (6) marked interest in professional literature.

12. *The Application of Scientific Methods to the Analysis of Educational Problems.*

The last and possibly the most important change which has taken place among the Disciples colleges is an increase in the application of the scientific method to the analysis of the problems of higher education. The faculties and administrations of at least half of the institutions are now making a serious attempt to study the problems of college instruction, organization and administration in an objective manner. The efforts to improve instruction, described in the preceding section are evidence of the results of the scientific method at work in the analysis of the problems of higher education. During the past two or three summers a number of staff members of the colleges have registered for courses in higher education in universities where such work is offered. Virtually all the recommendations which have been made to the respective colleges with respect to educational programs and internal reorganization have been or are being consummated.

Summary

While certain deficiencies have been pointed out in the service of the colleges surveyed, it is felt that a majority of these shortcomings are due to lack of adequate financial support. Other difficulties may be traced to a narrow conception, on the part of those in authority, of the purposes of institutions of higher learning.

Although these deficiencies have been pointed out, one should not lose sight of the enormous amount of improvement that has recently taken place. While these improvements cannot be mentioned in detail, they have occurred in practically all phases of the activities of the institutions. Improvement in physical facilities has taken place to a marked degree within the past five years. Space in the existing plants has been utilized to a much better extent. Curricula have been improved and strengthened. Standardization of work has taken place, many of the colleges having been accredited by regional standardizing associations in recent years. A multiplicity of degrees has been discouraged, and many of the institutions have limited the number of degrees they award to two or three. The situation with respect to graduate work has been improved. Preparatory schools attached to the colleges have been abandoned. The training of faculty members has been considerably increased. Teaching loads have been brought more nearly into line with accepted standards. Improved business methods have been manifest in the financial administration of the institutions. There has been a marked effort to improve methods of instruction. Finally, and possibly most important of all, the problems of the institutions have been attacked in a scientific manner, leading to the hope that, under such a type of scientific analysis, the problems that arise in the future will be solved more satisfactorily.

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